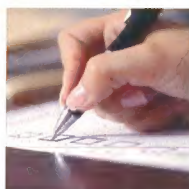
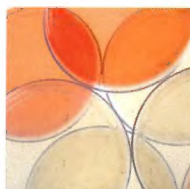
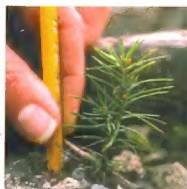


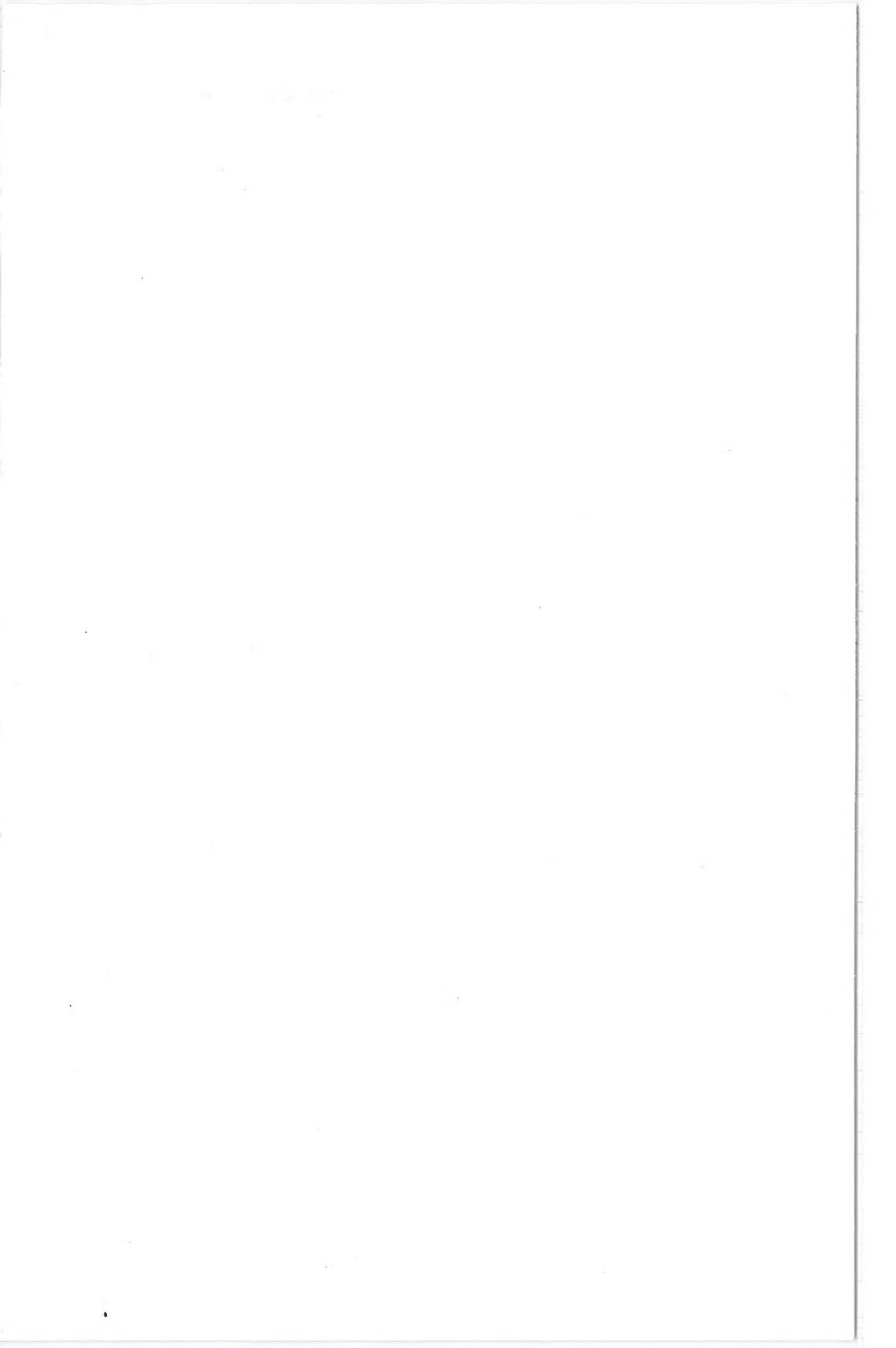
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JSR

Journal of Student Research





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**Journal of Student
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Volume X, 2011



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Petra Mohr
Editor-in-Chief

Susan McClelland
Research Services

Research Services
University of Wisconsin-Stout
152 Vocational Rehabilitation Building
Menomonie, WI 54751
(715) 232-1126
<http://www.uwstout.edu/rs/journal-of-student-research.cfm>

Foreword

Welcome to the 10th edition of the Journal of Student Research, the University of Wisconsin-Stout's student publication. Since its inception in 2002, the Journal of Student Research has published over 100 selective works, showcasing exemplary student scholarship on a variety of topics. With its goal to disseminate student research and creative activities, the Journal of Student Research continues to offer undergraduate and graduate students the opportunity to share their work with the academic community.

The Journal of Student Research is a prime example of the University of Wisconsin-Stout's commitment to further the student research enterprise and to support student-organized activities. Indeed, the Journal of Student Research is a joined effort between undergraduate and graduate students. All aspects of the production and publication process, such as printing, writing, and editing, are made possible only by the dedicated work of UW-Stout students.

The Journal of Student Research is published both in print and electronically, allowing a worldwide audience to read and view students' scholarly works. Such exposure allows students to take full advantage of the benefits associated with being published in an academic journal.

As you turn the pages in this 10th edition of the Journal of Student Research, I would like to direct your attention not only to the higher number of articles but also to the increased diversity of disciplines represented this year. I am delighted to see more students recognizing the value and opportunity provided by publishing in the Journal of Student Research. As the editor-in-chief, I hope to continue to see a growing interest of students from all academic disciplines. The rising competition of submissions may spark even more outstanding scholarly work in the years to come.

At last, I would like to express my gratitude on behalf of Research Services and the Journal of Student Research to the students whose hard work and determination made this 10th edition possible. I furthermore wish to thank the countless faculty members who volunteered their time and expertise during the review process. The volume you hold in your hands is a symbol of dedication to excellence and to student research on this campus.

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*IS Resources Support Tech Senior
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Dante and Han-shan: Masters of Visual Communication

Diana Witcher

Undergraduate Student, Fine Arts

Abstract

This paper explores the works of poets Dante Alighieri and Han-shan, focusing on their communication through detailed visual descriptions of their subjects. This technique results in a vivid literary painting, informed by the poet's religiosity and personal experience. Dante was a known public figure in 12th century Florence, who later suffered exile from his home. His work is both political and overtly religious. He expresses a dynamic, dogmatic spirituality informed by the theology of 12th century Christianity. He was educated, versed in the science of optics and utilized allegory in his work. Han-shan was an educated recluse, his poems not as overtly religious. In his poetry, he addresses Buddhist concepts of stillness, endurance, and close observation of nature. The beauty of nature largely influenced his work. Both poets observe, criticize, and comment upon the spiritual and political issues of their time. Their poems enlighten, instruct, and provide inspired insight upon spirituality and the human condition.

Keywords: Dante Alighieri, Han-shan, poetry, visual communication, spirituality

In his epic poem, *La Divina Commedia*, master poet Dante Alighieri employs striking imagery to portray an epic vision of the afterlife. The story is framed by Dante's spiritual

beliefs, the dogmatic theology of 12th century Christianity. Throughout the poem, the author depends upon the vivid description of each scene to express emotions that range from fear and isolation to wonder and awe of the spiritual world. The protagonist is placed within a series of visually striking scenarios as Dante uses dramatic imagery as a tool to persuade, guiding the reader along a path toward his grand vision of spirituality.

The Buddhist poet Han-shan utilizes similar visual imagery in his poetry. Like Dante he presents a literary painting, a description of a static moment that is meant to transform the reader. Han-shan's poems describe a spirituality that places humankind in a fundamental relationship with the natural world. Like Dante, he explores the human emotions of loneliness, isolation, frustration, and the darker aspects of human nature. In Han-shan's poetry, the author is an observer and critic but lives solidly within a natural environment that ultimately defines him. Each poet uses lyric language and visual imagery to describe his perception of the world. This perception is informed by spirituality and personal experience.

Han-shan's poetry expresses wonder and reverence toward the beauty of nature, a view best articulated in the visual details of his poetry. He conveys a humble observance of the natural world and communicates the experience of close observation in moments of stillness. Through this stillness, the observer becomes aware of the natural cycles of the seasons and experiences a heightened spiritual awareness. Han-shan places humanity within this framework, commenting upon the beauty and impermanence of life, as well as the sorrows of loss and the failings of human nature. The poet presents a worldview that is peaceful and enduring, where one overcomes obstacles through tenacious work and enduring faith.

The Cold Mountain trail goes on and on:
The long gorge choked with scree and boulders,
The wide creek, the mist-blurred grass.
The moss is slippery, though there's been no rain
The pine sings, but there is no wind.
Who can leap the world's ties
And sit with me among the white clouds?
(Hanshan, Leed, 1984, p.185)

In contrast to Han-shan's focus on contemplation and images of stillness and natural beauty, Dante portrays a dynamic, epic adventure. His masterpiece, *La Divina Commedia*, is a three-volume work that includes *Inferno*, *Purgatorio* and *Paradisio*. Dante himself is the protagonist. He descends through seven levels of hell, guided by the classical poet Virgil. The pair emerges from the underworld to witness purgatory, and Dante ultimately experiences the glory of heaven. Dante's most dramatic moments of transcendence occur in the presence of his muse Beatrice, and eventually in the Higher Heaven, when he comes face to face with God. Dante's vision is clear and his intent is to instruct through a cautionary tale. He systematically describes the believed consequences of sin, hoping to inspire and alarm people toward a more spiritual way of life. Dante presents a vision of the afterlife that is wild, dynamic, divided, and dogmatic. His character urgently undertakes a spiritual journey to witness an inspired vision of the afterlife. In the following passage Dante and Virgil exit hell, following the path to purgatory.

There is a place (as distant from Beelzebub
as his own tomb extends in breath)
known not by sight but rather by the sound

of waters falling in a rivulet
 eroding, by the winding course it takes (which is
 not very steep), an opening in that rock.
 So now we entered on that hidden path,
 my lord and I, to move once more towards
 a shining world. We did not care to rest
 (Alighieri, 1321, *Inf.* XXXIV 127-135)

Dante's poetry is informed by his spirituality and life experiences. Historical and literary records place him squarely in the political drama of 12th century Italy. He was born in the city of Florence, then the military center of Tuscany, in the spring of 1265 A.D. He wrote his first known poem in 1283 and became a member of the Council of 100, the governing body of Florence, at the age of 31. In 1300, Dante served a customary two-month term as one of six priorates, the highest political office in Florence (Hollander, 2001).

At the time, the political climate of northern Italy was marked by extreme factionalism between two parties: the Ghibellines, aligned with the emperor, and the Guelphs, aligned with the papacy. The Guelphs controlled Florence, but due to a century old bloody feud, the party was divided into two opposing factions: the Whites, of which Dante was a member, and the Blacks, into which he married. Dante's political beliefs were more in line with the Ghibellines, who favored imperial rule of Europe, but Dante was bound to the interests of White Guelphs (Hollander, 2001).

In June of 1301, Dante opposed the Pope's intent to provide troops in the Maremma region, a stance that caused his eventual condemnation by the Blacks. In November of 1301, the Black Guelphs sacked Florence, supported by the forces of Pope Boniface the VIII and the king of France, defeating Dante's party, the White Guelphs. In January of

1302, Dante was fined 5,000 florins and banished for two years. The following March, he was sentenced to death by burning, if he was to return to his home (Hollander, 2001).

During his first ten years of exile, Dante traveled extensively in the beautiful setting of northern Italy. While living in Verona in 1303-1304, he wrote *Convivio* ('The Banquet'), a volume that included his longest poems and an allegorical commentary. During this period, he also wrote the first two canticles of the *Commedia*. In his later life, 1312-1321, Dante enjoyed extended stays in Verona in the court of Cangrande della Scala and later in Ravenna, hosted by Guido Novello da Polenta, where he completed the *Commedia*. He died in September of 1321 of malarial fever (Hollander, 2001).

Dante's life experience is directly translated into the *Commedia*. The protagonist is an educated man, choosing to undergo a difficult and emotionally challenging journey, guided by Virgil, the father of classical literature. His work is highly visual, but the natural world is expressed consistently as a backdrop, never fully integrated into the story. This may be a result of him working both in exile and in an urban setting, physically removed from the natural world. The spiritual world portrayed by Dante is divided and marked by violence, politics, and examples of poor moral behavior. The poet seeks to reconcile the darkness of humanity with the divine goodness of spirit he observed both in his muse Beatrice and ultimately in the teachings of Christ.

Han-shan's work is similarly informed by his spirituality and life experience. His poetry has been renowned throughout China and Japan for centuries. Like Dante, Han-shan was an outcast and lived in one of the most beautiful places on earth. Han-shan did much of his work in a rural setting. The recluse poet is believed to have lived in China during the T'ang Dynasty (618-907 A.D.) (Watson, 1962).

"Han-shan," meaning "Cold Mountain," is a name borrowed from his home in the T'ien-t'ai Mountains (Henricks, 1990). The range reaches along the northeastern seacoast of Chekiang Province and is renowned for spectacular scenery. The region houses many Taoist and Buddhist monasteries and is the legendary home of spirits and immortals (Watson, 1962).

Like Dante, the fine points of Han-shan's life are most accurately revealed through close reading of his work. He was an impoverished gentleman farmer who traveled widely (Watson, 1962). The poet was an educated man; his work reveals an education in pre-T'ang classic literature. He seems to have worked in a government office as a clerk or scribe. Han-shan was married and had a son, and at some point, he farmed and lived in the country with his family. His poetry makes reference to his wife leaving him. After living for an extended time alone in the mountains, he returns home and his wife does not recognize him. The poet also writes of leaving his family and living the remainder of his life on Cold Mountain (Henricks, 1990). Han-shan's life of solitude inspired spare, precise, and beautiful poetry. Each poem seems a gem, telling of his life and the wonders of Cold Mountain.

Cold cliffs, more beautiful the deeper you enter
Yet no one travels this road.
White clouds idle about the tall crags;
On the green peak, a single monkey wails.
What other companions do I need?
I grow old doing as I please.
Though face and form alter with the years,
I hold fast to the pearl of the mind.
(Han-shan, Watson, 1962, p. 73)

Han-shan is best known for his “Han-shan” poems in which he describes his home on Cold Mountain and the challenge of reaching the top of the mountain (Henricks, 1990). Han-shan’s visual depictions of nature and allegories of spiritual striving and attainment are both diverse and beautiful. His poems include many subjects, including poverty, the brevity of life, commentaries on greed and arrogance, as well as criticism of the worldly Buddhist clergy and Chinese bureaucratic system (Watson, 1962). Most striking are the visual descriptions of Han-shan’s life and his mountain retreat. The poems are deliberately obscure, often leaving interpretation open to the reader. While the openness and universality of his poetry is profound, this very quality may lead to difficulties in the accurate interpretation of his poems.

The translation process is a lens that does not provide a completely accurate image of the original. Two aspects of this distortion are discussed most frequently in translations of Dante and Han-shan. Intimate aspects of the literary communication may be lost and the original intent of the work distorted. This problem is especially profound in the translation from Chinese to English. The difference in structure between the languages and cultural differences between the two societies make a single accurate translation very difficult to achieve.

Secondly, the natural beauty and rhythm of the original verse is inevitably lost. While there is a notable loss of rhythm and assonance in English translations of Dante, what is most profoundly lost in translation is the musical quality of the Italian language. The subtleties of verbal meanings and audible aspects of the language cannot be accurately converted into English. Furthermore, specific words cannot be suitably translated; for example, the word *stelle* (stars), which is repeated in many canticles of the *Paradisio*, is a diminutive word that has strong visual and rhythmic power (Domini 2008).

lo ritornai da la santissima onda
 rifatto sì come piante novelle
 rinovellate di novella fronda
 Puro e disposto a salire le stelle.
 (Alighieri, 1321, Pur. XXXIII 142-145)

From the most holy water I returned
 Regenerate, in the manner of new trees
 That are renewed with a new foliage,
 Pure and disposed to mount unto the stars.
 (Alighieri, 1321, Pur. XXXIII 142-145)

When comparing the translation with the original Italian verse, it is easy to see that the English translation lacks warmth, vibrancy, and rhythm. While the words may be accurate, they do not hold the same weight and beauty found in the original text. What remains intact throughout the translation is the strong imagery that is the hallmark of Dante. He uses universal images of holy water, growing trees, and foliage against a backdrop of a starry sky. Leading us through the complex maze of the *Commedia*, his work offers us the visual splendor of a master's painting.

Similarly, in Han-shan's poetry, difficulties in translation do not eclipse the powerful imagery and inspiring content but may mask their intention and true meaning. Translations of his poetry are compromised both by the difficulty in translating Chinese characters to modern language and the religious and cultural assumptions of the translator. Han-shan likely lived during the height of Chinese Zen Buddhist creative activity in China. Zen Buddhists, most notably in Japan, wrote much of the commentary on his poetry, ultimately influencing the translation of the poems. This led to readings of the poems that exaggerate the moments of calm and enlightenment in his poetry (Watson, 1962). Han-shan is

portrayed as an archetype of the “carefree, enlightened Zen layman,” a compassionate, enlightened figure that resides in the world but is not of it (Watson, 1962 p. 13). Han-shan is just as likely to express doubts and anxiety in his poetry as he is to communicate compassion and peacefulness: “Christian saints may be permitted their lapses of faith, but in Zen, with its strong emphasis on individual effort and self-reliance, a man, once enlightened is expected to stay that way” (Watson, 1962, p. 13-14).

In addition, translating Chinese characters into Western language is a challenging task. In “Gary Schneider, Han Shan, and Jack Kerouac,” author Jacob Leed (1984) highlights a conversation in Kerouac’s novel *The Dharma Bums*. The characters Japhy and Ray argue the difficulty of translating Han-shan...

“Why don’t you just translate it as it is...?”

“...Yeah, but what do you do with the sign for long, sign for gorge, sign for choke, sign for avalanche, sign for boulders?”

“Where’s that?”

“That’s the third line, would have to read ‘Long gorge choke avalanche boulders.’”

“Well that’s even better!”

“Well yeah, I thought of that, but I have to pass the approval of Chinese scholars here at the university and have it clear in English.”

(Leed, 1984, p. 190-191)

In addition to differences in the written language, the culture and spirituality of the East can be difficult to translate accurately. The expressiveness of classical Chinese poetry is also compromised in translation. Classical Chinese culture and aesthetics differ dramatically

from their Western counterparts (Yip, 1997). European past, present and future tenses limit the concepts that can be verbally conveyed. Chinese verb elements often refer to *Phenomenon*, a concept in which time is considered an arbitrary invention created by humankind (Yip, 1997). This idea cannot be succinctly translated into Western language but may be experienced by watching a film.

The Western concept of being conceals being rather than exposing it... the capacity of the Chinese poem to be free from Western arbitrary temporal constructs and to keep a certain degree of close harmony with concrete events... can be illustrated by the way filmhandles temporality... approximating the immediacy of experience.

(Leed, 1984, p. 6)

This method of handling time, offering a series of images as if the story was a film or graphic novel, is similar to Dante's technique of visual rendering. The author provides a detailed description of a scene, 'painting' it for the reader to enjoy and interpret. Dante's work is so convincing due to this unique pictorial narrative technique; he allows the internal aspects and emotions of the characters to be revealed by their facial expression and visual aspects of the environment (Hinshelwood, 1965). With words and symbols, the poet paints a multilayered picture of a moment, followed by commentary that places the moment within the context of the poet's experience, drawing the reader into his world. Han-shan uses a similar technique in the following poem:

Atop the flowers, a golden oriole;
"Kuan-kuan," its sound, oh so sweet!
A beautiful woman, complexion like jade,
Facing this way amused, she can't get her fill;
Tender thoughts in her young age.
But when blossoms fall, the bird too will leave;
Shedding tears, she'll face the fall wind.
(Han-shan, Henricks 1990, p. 392)

Han-shan distills a brief moment in time, made poignant through close observation and deliberate choice of subject. He comments on the impermanence and changeability of the material world; the fleeting beauty of the moment is followed by a sorrowful comment upon the inevitability of the loss of youth and joy. One of the compelling aspects of his poetry is that the ultimate meaning is left open to the reader to interpret and ponder. The spiritual meaning of this passage is subtle and perhaps intentionally ambiguous.

While Dante is clearly a devout poet, scholars are left guessing at the specifics of Han-shan's religious and spiritual beliefs. Han-shan was likely a Zen Buddhist but probably not extremely devout, as he both criticized and mocked the Buddhist clergy in his work. There is also evidence that Taoism influenced his poetry (Henricks, 1990). Han-shan's poetry expresses Buddhist philosophy in a personal and passionate way and much of the imagery found in the verses is directly drawn from the Buddhist sutras, or sayings of the Southern School of Zen (Watson, 1962).

Also apparent in Han-shan's poetry are Buddhist perspectives of humanity as part of nature as well as transcendence through meditation and acceptance of the impermanence of physical reality. Zen Buddhist spiritual understanding is based upon the concept of one mind. The Buddha mind is naturally innocent, eternal, and enlightened.

The concept of the one mind includes all things that are experienced, as well as all feeling and perceptions. This is called the 10,000 forms, a mirror that reflects all, and in its true nature is pure, a clear glass, untouched by the world (Henricks, 1990).

Dante Alighieri describes a spiritual world as beautiful and poignant as Han-shan's, but infinitely more dramatic and violent. In *Inferno*, this violence is visited upon a myriad of sinners as he unmercifully examines the dark side of human nature. Over this dark background, he paints an intricate vision of purgatory and paradise, designed to guide and inspire humankind to achieve spiritual perfection. Dante presents this vision using overt religious imagery and symbolism, creating a complex, multi-leveled manuscript. He places himself as the protagonist, chosen by God to follow in the footsteps of Virgil. He crafts a theme of the religious pilgrim, moving doggedly forward through many settings, witnessing the afterworld in an effort to spiritually elevate humanity.

In *Inferno* the protagonist is often lost and frightened, depending upon his guide Virgil for protection and direction, mirroring the Christian tenet that the believer must rely upon Christ to guide him to heaven. It is apparent that Dante sees Virgil as a heathen in his choice to place him with other virtuous pre-Christian figures in the first circle of hell. It is ironic that Dante relies so heavily upon a non-Christian for support throughout his journey through the *Inferno*. This is certainly a reference to his deference to classical literature in general, and Virgil specifically. In the early 1300s, Dante re-read the Latin classics, which had a profound effect upon his work (Hollander, 2001).

Dante's writings were intended to illuminate and educate through the medium of epic poetry. Dante believed that certain people are chosen by god to help others to transcend

human nature and sought to spiritually illuminate humanity. The poet believed that people are capable of understanding profound truth and through virtue humankind can correct an innate tendency to sin (Boyde 1993). "The human heart can never be satisfied by anything except an infinite Good... a Good beyond which there is nothing to which one might aspire" (Boyde, 1993, p. 80-83). Dante created *Paradiso* as a series of understandable, appealing religious images (Boyde, 1993). This mirrors a common occurrence in the art of the Middle Ages: the creation of elaborate religious images intended to inspire spiritual contemplation.

Dante used overt religious imagery in his work and symbolically illustrated his vision of the afterlife through allegory. Poetic allegory has the following components: it is fictional, understood as a metaphor, actions occur internally within the psyche or soul of the protagonist, and it uses personifications of the vices and virtues (e.g., Incontinence, Despair and Hope) (Hollander, 2001). Dante speaks directly to this concept in the following quote.

The first is called the literal and this is the
sense [of the text] that does not go beyond the
surface of the letter, as the fables of the poets.
The other is called the allegorical, and this
is the one that is hidden beneath the cloak of
these fables, and it is a truth hidden beneath a
beautiful lie...
(Alighieri, Conv. II, Hollander, 2001, p. 98)

A vivid example of his use of visual metaphor is the repeated use of light and shadow to symbolize goodness and evil. In the *Commedia* the sun symbolizes love, divine goodness and heavenly grace (Boyde, 1993). At the beginning of *Paradisio*, Dante imitates Beatrice and looks directly into the sun. Beatrice

inspires him, and Dante says that her action “poured though his eyes into his imagination.” He compares her gaze with a beam of light, falling on a horizontal surface and likens his own gaze to the resulting beam of light that is reflected from it (Boyde, 1993, p. 72-73, p. 85-87). These passages show that Dante is intimately aware of the power of the sense of sight, and uses visual cues to paint metaphorical pictures that define his vision. Dante creates a “beautiful lie” to graphically illustrate a poignant moment of spiritual revelation.

When, turned on her left side, I was aware
Of Beatrice, fixing on the sun her eyes:
Never on it so fixed was eagle's stare.
And as array will always rise
Where the first struck, and backward seek ascent
Like pilgrim hastening when he homeward hies,
So into my imagination went
Through the eyes her gesture; and my own complied,
And on the sun, past wont, my eyes were bent.
(Alighieri, 1321, Par. I 46-54)

While there are many references to light in the *Commedia*, the *Inferno* is full of references to shadows, evil, and the dark side of mankind. Hell's darkness illustrates the consequences of sin and the inability of the sinner to love God (Boyde, 1993). Dante explores this dark side in graphic detail, revealing to the reader every facet of the failings of mankind. The variety of extreme environments and events depicted in the *Divine Comedy* represent the diverse aspects of human nature and desires. Dante is describing Carl Jung's psychological concept of the realm of “Shadow,” the dark internal world that is hidden within the psyche (Domini, 2008). Dante's character experiences ongoing struggle and lack of direction, expressing a dark, fearful perception

of the human experience. In the following passage, the topography and very atmosphere reflect the emotional state of the character as well as providing a sense of suspense and foreboding (Domini, 2008).

True it is, I stood on the edge of the descent
Where the hollow of the gulf out of despair
Amasses thunder of infinite lament.
Sombre, profound, and brimmed with vaporous air
It was, so that I, seeking to pierce through
To the very bottom, could see nothing there.
Let us go into the blind world below,
Began to me the poet all amont.
I shall be first and thy behind me go.
(Alighieri, 1321, Inf. IV 7-15)

It is telling that Dante's guide Virgil describes hell as the "blind world." Dante believed that the visual senses were the most important to the soul and spirituality. His exploration into the subjects of light and color bring depth to his work and reveal a deliberate, informed artistry. The poet studied Aristotle's philosophical concept of light, as well as the science of *perspectiva* or optics, which was developed by the Arabs and combined strict geometry and observations of experiments with light. He wrote extensively on the subjects of optics, color, and light in the allegorical commentary of *Convivio*. Dante's work contains many references to reflection and refraction. He often describes rays of light, light sources, and light rays being bent or broken (Boyde, 1993).

He writes of spirituality as if he is discussing the arts of painting or sculpture, describing the actions of the spirit as "ri-presentare," "to set down a likeness in some suitable medium, so that the recorded object may be contemplated even when it is absent or has ceased to exist." Dante believed

that an artist's ability to accurately imitate nature is an act of profound truth, asserting that truth is evident in the artistic process and also embodied in the work of art (Boyde, 1993). The poet reveals a belief in the ability of works of art to communicate through the visual senses, becoming a catalyst for spiritual transformation.

In *Paradisio*, when the Pilgrim first comes to the edge of the Highest Heaven, he approaches a stream, which sparkles with light and flame like many colored jewels. The stream represents the abundance and goodness of heaven. The dramatic imagery matches the profound event of the Pilgrim crossing into the Highest Heaven. In his description of the stream, Dante makes reference to the New Testament and Revelation 22:1, the "river of water of life clear as crystal" (Boyde, 1993).

And I beheld, shaped like a river, light
 Streaming a splendor between banks whereon
 The miracle of the spring was pictured bright.
 Out of this river living sparkles thrown
 Shot everywhere a fire amid the bloom
 And there like rubies gold-encrusted shone.
 (Alighieri, 1321, Par. XXX 61-66)

The poet deliberately uses color in the *Divine Comedy* to illustrate specific ideas. In *Purgatorio I*, the color blue has a healing, restoring effect upon the pilgrim as he emerges from the *Inferno*. In lines 13 to 18, Dante describes a scene in the early morning when the sun is still below the horizon. He describes the sky as "pure and cloudless as far as the first of the celestial spheres." The entire sky gradually becomes blue, the "sweet colour of an oriental sapphire." This color has a profound effect upon the mental state of the character. It "renews delight" for the pilgrim and heals the pain in his

eyes that were hurt by “dead air” of the *Inferno* (Boyde, 1993, p. 81).

Dante uses color, light and detailed description of striking images to communicate complex visual ideas. It may have been a challenge for Dante to create images that would be appropriate to represent the divine. Natural images were associated with the earth, the body, and ultimately sin. “What shape can enlightenment take when any natural form prompts connection to the Fall?” (Domini, 2008, p. 271). His solution is to use light as a metaphor for divinity. He also models images after natural forms that are considered most beautiful and pure, for example a rose. Dante conceives of the nine spheres of heaven as a series of interlocking petals that join together at an apex.

So over the light and round and round did I
See mirrored on a thousand tiers all those
Of us permitted to return on high.
And if the least degree so greatly glows,
What measure shall suffice for the amplitude
Of the extremest petals of this Rose?
(Alighieri, 1321, Par XXX 112-117).

Dante’s literal descriptions of the scenes in the *Commedia* are images that could be easily interpreted by a painter (Hinshelwood, 1965). This technique of precise visual description effectively communicates complex ideas. Not unlike a filmmaker or graphic artist, Dante uses visual metaphor to illustrate action through a series of still images, communicating states of mind through visual descriptions (Hinshelwood, 1965). Dante may even omit the description of actions altogether, instead relying on a single vivid picture to communicate the scene (Boyde, 1993, p. 72-73).

[Dante] sees the world with the eye of a painter... Indeed no quality of the *Divina Commedia* is more striking than Dante's all-pervading preference for clear, concrete, luminous and colorful visual images, which arouse the feeling that he is not so much describing in the purely literary sense as laying down a specification for a painting.... (Hinshelwood, 1965, p. 277)

Han-shan similarly uses a series of vibrant images to draw the reader into his poems. Like Dante, he articulates strong, intriguing images that paint a picture, a precise moment in time. "[Han-shan] often employs fresh, striking and dramatic images, which really stand out... normally found at the end of a poem where they make the strongest impression" (Henricks, 1990, p.13). Han-shan's poems convey an understanding that "in reality there is only one thing, the one mind. That one mind is in its true nature pure, undifferentiated, eternal, unchanging, forever enlightened-it is the true mind, it is Buddha-nature" (Henricks, 1990, p. 16).

When the moon shines, the water glints and sparkles;
When the wind blows the grasses rustle and sigh.
Snowflakes make blossoms for the bare plumb,
Clouds in place of leaves for the naked trees.
At a touch of rain, the whole mountain shimmers.
(Han-shan, Watson, 1962, p.63)

Han-shan's verse affectionately describes the beauty of moonlight over water, a reverence for stillness and the profound beauty of his mountain home. His poems provide an accessible simplicity and perfection achieved through the

spare patience of a man who looks deeply into the essence of the natural world.

Dante Alighieri and Han-shan were master poets that eloquently portrayed their individual experience. Analysis of their work reveals a similar technique of detailed visual description, which is intended to engage, inspire, and enlighten the reader. This technique is important to note as an effective tool for communication. While a picture may be more descriptive and telling than a written work, writers and poets can use precise descriptions of moments in time to communicate their spirituality or world view, and encourage contemplation.

Comparison of the poets' work reveals disparate viewpoints, literary similarities, and a shared mastery of visual literary techniques. Dante painted a vision of his personal experience, a world that was dramatically divided and informed by his devout Christianity. His use of light and color was detailed and deliberate, revealing his passion and reverence for art and literature. His work is an epic testament to his understanding of virtue and a master rhetorician's effort to integrate a political and social order into Christian theology.

Han-shan portrayed a simpler, more peaceful outlook that may not have been overtly religious in nature, but reflected many aspects of Zen Buddhism. His visual descriptions offer profound insight into the nature of the universe, and are a testament to the possibility that contentment is truly found in the present moment. His timeless vision of the world of Cold Mountain communicates both natural beauty and a gentle invitation to spiritual delight. Han-shan's experience rests in stillness, while Dante's drama, horror, and dynamic continue to impress each new generation of readers.

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Immune Mechanism in Lung Prevents Fungal Infection

Bryan Prahl

Undergraduate Student, Applied Science

Travis Seehaver

Undergraduate Student, Applied Science

Abstract

Aspergillus fumigatus is a filamentous fungus that can cause fatal infections in people with defective immunity. Healthy individuals have a strong resistance to this fungus, even when exposed to high concentrations of the organism in the air they breathe. It is not well understood how the immune system in healthy individuals prevents germination of the inhaled spore-like conidia of *A. fumigatus*. However, alveolar macrophages are a primary immune defensive cell in the lung and have been implicated in the resistance to invasive aspergillosis. We are examining the hypothesis that macrophages prevent conidial germination by depriving them of critical nutrients, rather than by killing them with destructive antimicrobials. Most pathogens, including *A. fumigatus*, preferentially metabolize glucose and other highly-reduced carbohydrates for energy. If *A. fumigatus* cannot obtain preferred nutrients, it will utilize alternative molecules for survival, as shown in the expression of unique metabolic enzymes. Using conidia as a molecular probe, we have identified changes in fungal gene expression when engulfed in macrophages, which is consistent with a starvation response. Isocitrate lyase is known to be increased during the starvation response in fungi, and we have observed that it is upregulated in conidia when phagocytosed within

macrophages. Our results indicate *A. fumigatus* conidia reprogram their metabolism due to the lack of nutrients in the macrophages. Our *in vitro* data indicate nutrient loss is sufficient to block conidial development. This information suggests alveolar macrophages prevent germination of *A. fumigatus* conidia by starving them, thereby avoiding both infection and inflammation in the lung.

Keywords: *Aspergillus*, host defense, immunology, alveolar macrophage

Invasive fungal infections are an increasingly common, life-threatening disease in hospitalized patients with complex health problems (Ampel, 1996; Maertens, Vrebos, & Boogaerts, 2001; Dykewicz, 2001; Walsh & Groll, 1999). In recent decades, *A. fumigatus* has become the leading airborne fungal pathogen in immune-compromised individuals (Stevens et al., 2000; Latge, 2001). Since 1978, the increase in aspergillosis has exceeded all other opportunistic mycoses (Groll et al., 1996). Invasive disease from *A. fumigatus* is now responsible for 4% of fatalities in tertiary care facilities and teaching hospitals (Vogeser, Wanders, Haas, & Ruckdeschel, 1999; Johnston, Jr., 2001).

Alveolar macrophages (AM) are the resident immune cells in the airway, which puts them at the front line in defending the host against airborne infectious agents. Despite extensive study of this cell, the mechanism by which they neutralize fungal pathogens is not completely understood. Recent published information about host defense mechanisms that protect from invasive aspergillosis continues to identify complexities preventing a clear understanding about the mechanisms by which leukocytes kill the aspergilli (Henriet et al., 2010).

In normal individuals, exposure to large numbers of *A. fumigatus* conidia does not lead to infection, due to the robust natural resistance to this organism. By contrast, clinical evidence indicates that invasive aspergillosis can occur in immune-suppressed humans even when following inhalation of low numbers of conidia. During low-level exposures in humans, AM rather than neutrophils are the primary phagocytes responding to conidia in the lung. Thus, infections by *A. fumigatus* in immune-suppressed individuals are probably due to defective responses by AM, since neutrophils are not generally recruited in this situation. This identifies a need to better describe the conidiacidal activity in AM which provides immune surveillance in the lung.

Published information from our laboratory provided evidence that unlike neutrophils, anticonidial defenses in AM are independent of the reduced nicotinamide adenine dinucleotide phosphate (NADPH)-oxidase (Bonnert, Cornish, Harmsen, & Burritt, 2006; Cornish et al., 2008). Moreover, AM phagocyte NADPH oxidase activity is vastly diminished relative to neutrophils under all conditions. We also previously reported that AM responding to conidia do not show increased transcription of genes associated with antimicrobial defense mechanisms, such as oxidant generation, phagolysosomal acidification, or iron sequestration, though other studies have indicated these may be important in this resistance (Ibrahim-Granet et al., 2003; Zarembek, Sugui, Chang, Kwon-Chung, & Gallin, 2007; Philippe et al., 2003). We are investigating the possibility that AM use nutrient starvation to suppress conidial germination, and therefore, reduce the threat of invasive aspergillosis in the lungs of humans without the release of potent inflammatory mediators.

In the current study, we examined *A. fumigatus* conidia phagocytosed in macrophages for evidence to describe the conditions inside the macrophage that prevent germination.

Our study utilizes *A. fumigatus* conidia as a molecular probe of the internal conditions of the macrophage that prevents infections in the normal individual. Our results support the view that nutrient deprivation suppresses conidial germination in the phagolysosome of the AM.

Material and Methods

Unless otherwise stated, all reagents and chemicals used in this study were obtained from either Sigma Aldrich (St. Louis, MO) or Fisher Scientific (Pittsburgh, PA). All microscopic examinations were performed on a Zeiss Axioscope 2-Plus microscope and imaging system using Zeiss Axiovision version 4.5 software. Statistical analysis was performed for analyses using the Student's t-test.

Preparation of *A. fumigatus* Conidia

A. fumigatus used in these studies was obtained from clinical isolate #13073 at the American Type Culture Collection (Manassas, VA). In some analyses, a congenic strain that expresses green fluorescent protein was used, (Wasylnka & Moore, 2002)¹. Conidia from both strains were grown at 37° C for 5 days on a Sabouraud Dextrose agar slant and collected as we previously described (Bonnett et al., 2006). Enumeration of conidia was done by hemocytometer. Minimal medium was prepared at 71 mM NaNO₃, 7 mM KCl, 2 mM MgSO₄, 11 mM KH₂PO₄, 56 mM glucose, and 2 ml Hunter's trace metals/liter.

Live Animal Studies

Female 8-week-old C57Bl/6 mice were obtained from Harlan Laboratories (Madison, WI). Animals were maintained in specific pathogen-free housing in microisolator cages in an

¹ The strain of *A. fumigatus* expressing the green fluorescent protein was kindly provided by Dr. Margo Moore (Simon Fraser University, British Columbia, Canada).

environment of filtered air and given food and water *ad libitum*. Mice were not immune-suppressed prior to the studies. Mice were inoculated intrapharyngeally as we previously described (Cornish et al., 2008), using 40 μ l HBSS containing 10^6 conidia per animal following brief isoflurane inhalation. Following inoculation, animals were returned to their cages for specified times before being euthanized by overdose of isoflurane. BAL fluid was collected in 10mL per sample in ice-cold HBSS containing 3 mM EDTA as described in Cornish et al. (2008). All manipulations in animals were approved by the Institutional Review Board for the Institutional Animal Care and Use Committee at the University of Wisconsin-Stout.

Coverslip Cultures of J774 Cells

In some experiments, the J774 mouse macrophage cell line (J774A.1, ATCC #TIB-67) was utilized to examine the ability of this phagocyte to suppress germination of *A. fumigatus* conidia. J774 cells were seeded onto steam-sterilized coverslips in the bottom of 6-well cluster tissue culture plates containing 3 ml of DMEM with 10% fetal calf serum (DMEM10). Incubations of J774 cells were carried out at 37° C in 5% CO₂. When cell monolayers were approximately 70% confluent, 2×10^5 *A. fumigatus* conidia were introduced into individual wells, which were returned to incubation conditions between 4 and 24 h. Examination of coverslips was done by inverting the coverslip onto a glass slide so that cells were between the slide and coverslip, then visualizing the macrophages and conidia by microscopy. In this way, cells did not require manipulation to dislodge them from the substrate prior to examination by microscopy. Following examination of wet mounts, the percent germination was calculated for conidia that were confirmed to be internalized within macrophages. This was verified by examining the various focal planes

of the cells in the wet mounts. In some cases, congenic *A. fumigatus* conidia expressing green fluorescent protein were used to enhance the visual contrast with the macrophage.

Fungal Transcriptional Analysis

Conidial RNA was extracted by 0.1mm of zirconium/silica beads (BioSpec, 11079101Z) in a 1.5mL screw top microfuge tube using a bead-beating method. The tubes were run at speed 4 for 90 seconds on the FastPrep 120 from Thermo Electron Corporation. RNA from the supernatant following a centrifugation at 4000 RCF for 3 minutes to pellet conidial debris was extracted for RNA purification through Promega's SV Total RNA Isolation System (Z3100, Promega, Fitchberg, WI). RNA was concentrated using the CentriVap Concentrator from Labconco (Kansas City, MO). To minimize the contamination of genomic DNA, all samples were treated with DNase (Promega's RQ1 RNase-Free DNase, M6101). RNA samples were then amplified using a qRT-PCR Master Mix (Fisher Scientific, AB4100A) on a Bio Rad CFX96 Real-Time System. Primers and probes were designed² for isocitrate lyase (ICL), alpha-ketoglutarate dehydrogenase (AKD), and glyceraldehyde 3-phosphate dehydrogenase (GAPDH). Sequences of the primers are shown in Table 1. RNA values from free conidia and those bound inside macrophages were compared, as described in the results.

Table 1
Sequences of primers used in the studies described.

Gene	Forward Primer	Reverse Primer	Probe
ICL	5'-CTGCCTAACATCGACTAC-3'	5'-CTCTCGATGACAGCTTG-3'	5'-/56-FAM/TCATAACAG/ZEN/CAGTGAGACACCA/3181FQ/-3'
AKG	5'-CTGACAAATCATCTCAAGG-3'	5'-CCCATAGTGGTCAAGTTC-3'	5'-/SHEx/TGTTGTAACCGAATGCCTCAGC/31AB1FQ/-3'
GAPDH	5'-GTACATTGAGACCTACG-3'	5'-GGTGAAACACCAAGTAGA-3'	5'-/STET/TCACGGCAAGAAGATTGCTT/31AB1FQ/-3'

² Primers and probes were designed and analyzed using Beacon Designer Software (http://www.premierbiosoft.com/molecular_beacons/index.html).

In Vitro Nutrient Depletion in Growing Conidia

10^7 conidia were incubated at 37° C for the indicated time in DMEM-10 with 5.5 mM glucose at 37° C in 5% CO₂, then pelleted at 2000 RCF for 3 minutes at 4° C and washed twice in Bio-Whittaker Hank's Balanced Salt Solution without glucose, then suspended in the wash medium. Incubations were then continued at 37° C for up to four additional hours prior to examination by microscopy and enumeration of conidial diameters. For each condition, 300 conidial diameter measurements were collected by microscopy and image analysis and then displayed using Graphpad Prism³ software.

Results

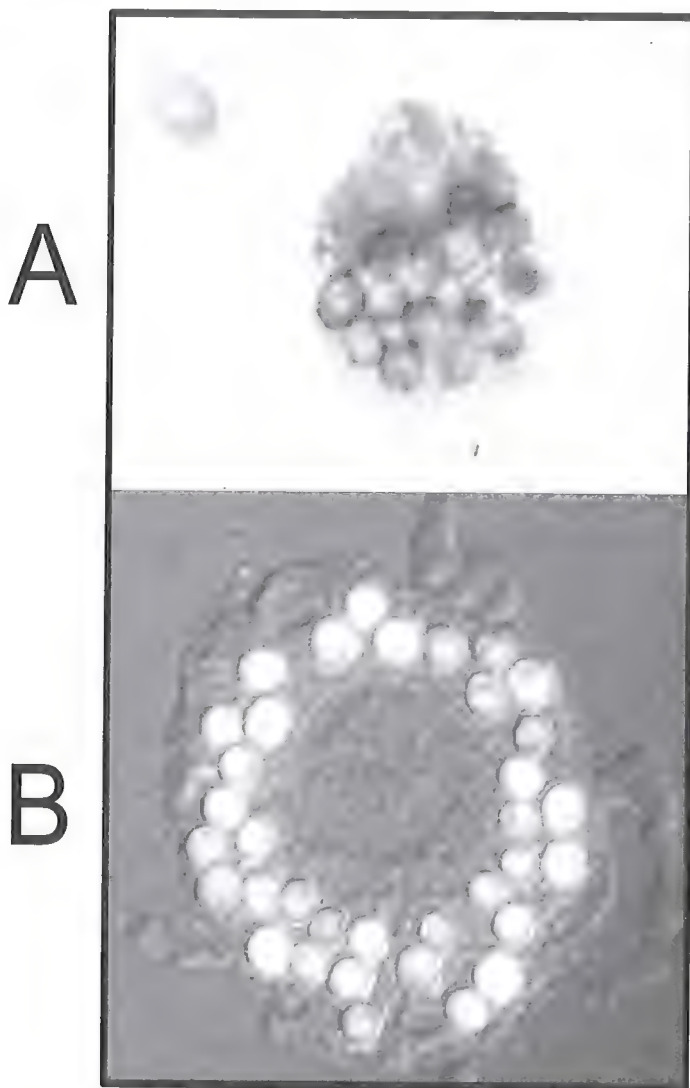
Inhibition of Conidial Germination in J774 Cells

We previously showed that *A. fumigatus* conidia inoculated into the lungs of mice resulted in phagocytosis of the conidia and inhibition of conidial germination in normal BALB/c, as well as in immune deficient CXCR2^{-/-} and gp91^{phox-/-} mice (Cornish et al., 2008). We extended those studies in female 8-week-old C57Bl/6 mice by confirming that conidial germination is not evident within AM at additional time points up to 24 h, including the representative time of 12 h (Figure 1A). This result suggested that AM from mice have a mechanism of preventing fungal growth that is not dependent upon either the NADPH oxidase or neutrophil recruitment and remains evident at least 24 hours. We examined this effect of macrophages on *A. fumigatus* conidia more closely using the J774 mouse macrophage cell line, which suppressed conidial germination similar to that of AM. Our data indicate that conidia were phagocytosed rapidly (90% within 90 minutes, data not shown), demonstrated <5% germination for up to 24

³ Graphical analysis was provided by Graphpad Prism software(<http://www.graphpad.com/prism/prism.htm>).

hours, and showed <5% germination for up to 24 hours. At 12 h, following exposure of conidia to J774 cells, engulfed conidia have swollen but do not germinate (Figure 1B).

Figure 1

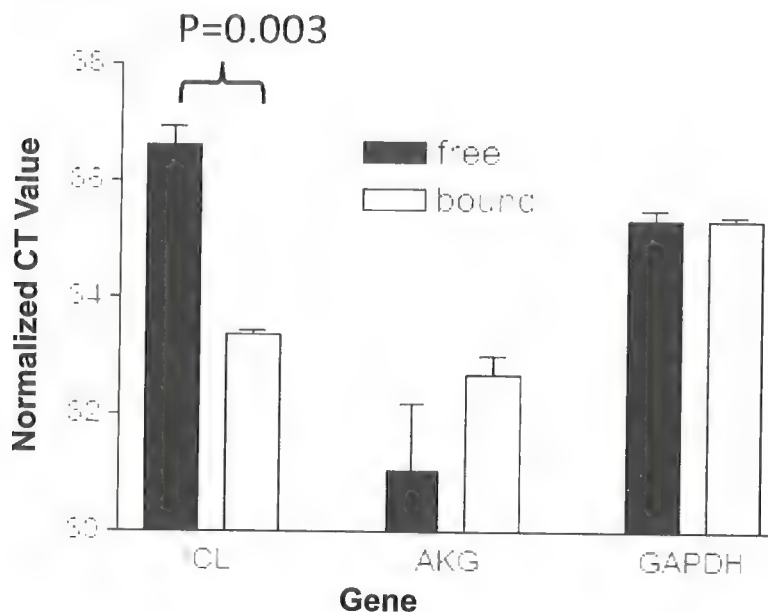


Relation of Conidia Germination to Glucose Concentration

To determine whether a minimum concentration of glucose is needed to support conidial germination, minimal agar medium containing increasing glucose concentrations (between 0 and 8 mM) was prepared and inoculated with 104 *A. fumigatus* conidia. After 3 days of incubation at 37°C, abundant growth was observed on media containing 8 and 4 mM glucose, but below 2 mM, the germination rate was dependent upon both time and glucose concentration with no germination at 0 mM glucose (data not shown).

Transcriptional Analysis of Conidia Phagocytosed in J774 Cells

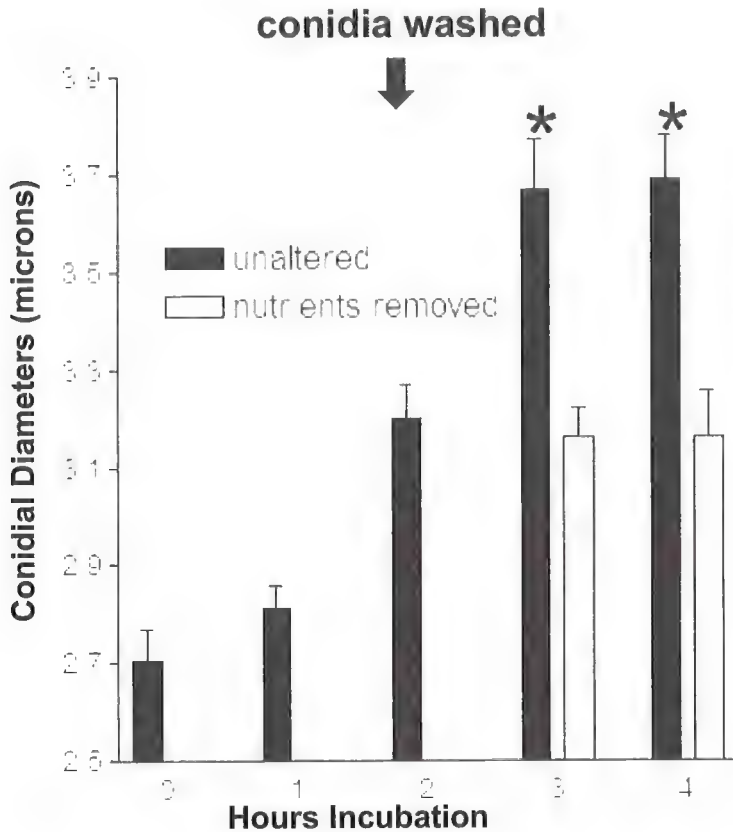
We next examined transcriptional profiles of conidia phagocytosed for 4 h in J774 cells. These studies were performed to determine whether engulfed (bound) conidia showed transcriptional evidence of nutrient deprivation that could account for the impaired intracellular germination. The abundance of mRNA transcripts corresponding to the ICL and AGD genes was determined using real time quantitative PCR, as Ct values were determined in triplicate. Bound conidial RNA that had been extracted from J774 cells was compared to that extracted from an equal number of free conidia incubated in RPMI-1640 medium without J774 macrophages. Values for both free and bound conidia were normalized to the abundance of transcripts for glyceraldehyde 3-phosphate dehydrogenase (GAPDH), which was used as a housekeeping reference gene (Figure 2). Statistical significance of groups shown identified $P=0.003$.

Figure 2

Reduction in Nutrient Concentration in Actively-Developing Conidia

We next determined whether removal of nutrients from the culture medium containing actively developing conidia could halt further fungal development and germination. The effect of nutrient depletion in this experiment was determined by measuring conidia diameters using microscopy and imaging software. Our results showed that depletion of nutrients in actively growing cultures of conidia indeed causes an immediate blockade to further development (Figure 3). Progression in conidial diameters and germination was not restored within four hours when remaining in nutrient-free medium (data not shown). Statistical analysis was used to compare conidia in unaltered conditions to those where nutrients were removed, with P values for both comparisons <0.002 .

Figure 3



Discussion

We have investigated nutrient deprivation as a means by which AM inhibit germination of *A. fumigatus* conidia. This immune mechanism has been implicated in neutrophils and macrophages to pathogens other than *A. fumigatus* (Lorenz & Fink, 2002). Nutrient deprivation would be a logical means of immune surveillance for the lung against aspergillosis, since it could prevent disease with minimal damage to host tissue.

This is important in the lung, where constant exposure to airborne particulates could trigger chronic inflammation and impaired lung function.

The goal of this study was to provide information about the conditions in the macrophage that suppress conidial germination. We collected conidia following incubation in viable macrophages, then examined their transcriptional changes using real time quantitative polymerase chain reaction (PCR). We compared the expression of two enzymes that regulate carbon fluxes within the mitochondria. When examined together, activity of these enzymes give clues to nutrient availability for the organism. During times of nutrient abundance for fungi, AKD is expressed and serves a key role in the Krebs cycle by directing carbon flow toward succinyl-CoA as CO_2 is produced and lost. When carbon sources are limiting, reducing power for the cell is maintained by shifting to an alternative metabolism that does not involve loss of carbon through CO_2 production. In fungi, this starvation response includes the glyoxylate cycle, where isocitrate lyase shunts carbon flow from isocitrate to glyoxylate. Thus, upregulation of isocitrate lyase functions as a molecular switch to ensure the production of glyoxyloate from isocitrate, and prevent the loss of carbon in the form of CO_2 .

By comparing the expression of ICL and AKD, we were able to evaluate nutrient availability inside the macrophage indirectly through conidial responses. Since both ICL and AKD are known to be regulated at the level of transcription, quantitative PCR is suitable for evaluating these pathways in the fungus. Our results confirmed that within four hours following phagocytosis in macrophages, conidia reprogram their metabolism toward a starvation response not seen when conidia develop in medium alone. Our conclusion was based on the fact that mRNA corresponding to ICL gene expression, associated with the starvation response, was upregulated 32-fold with respect to that expressed under conditions of nutrient abundance in comparison to GAPDH expression as a molecular reference.

Our transcriptional information suggests phagocytosed conidia experience limited nutrient availability. However, they do not confirm that these conditions are sufficient for suppressing conidial germination, especially once conidial swelling had begun. We therefore examined this aspect of our hypothesis in conidia incubated in artificial media where nutrient concentrations could be controlled. We confirmed that development and germination of live conidia can be blocked by switching them from a medium containing 5.5 mM glucose, a normal concentration of glucose in blood, to one devoid of utilizable carbon. This situation presumably parallels blockade of germination for conidia phagocytosed in AM and provides further evidence to support the notion that nutrient deprivation is a plausible immune response in the lung that suppresses infection from airborne fungi. We cannot exclude the possibility that additional AM responses are involved in this anticonidial response. However, our results are consistent with the idea that nutrient depletion alone is sufficient for preventing morphological development of conidia inside the AM.

Our results offer new insight into the complex immune responses involved in pulmonary host defense and suggest a possible clinical application. Pharmacologic manipulation of nutrient access inside the phagolysosome in AM may reduce the chance of infections in immune compromised humans, though additional analyses are necessary to test that possibility. Further research will also be needed to reveal the eventual fate of conidia bound within AM. It remains to be determined whether conidia phagocytosed in AM are eventually killed as a result of starvation, or subsequently transported elsewhere to be destroyed by an unresolved fungicidal response.

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Sovereignty and "Jihadist" Movements: A Comparison of Conflict in Northern Ireland and Uganda

Nicole Ries

Undergraduate Student, Applied Social Science

Abstract

This article synthesizes three theories of globalization (Jihad vs. McWorld, global governance theory, and world culture theory) to explain variance in conflict between two different cases. The Irish Republican Movement (IRM) or Irish Republican Army (IRA), formerly active in Northern Ireland, and the Lord's Resistance Movement (LRM) or Lord's Resistance Army (LRA), active in Uganda since the late 1980s, are compared. Both conflicts are results of post-colonial turmoil that established systems of social stratification based on standards imposed by British imperialism. However, the conflict in Northern Ireland has come to a more peaceful, and therefore more successful, resolution while the conflict in Uganda continues to increase. Such variance is due to the reformation of the Irish Republican Movement along globally legitimized prescriptions, while the Lord's Movement has failed to do so. This comparative study helps illustrate a malleable, although generic, solution for conflict resolution.

Keywords: globalization, Lord's Resistance Movement, Irish Republican Movement, Jihad, McWorld

Around the world, globalization has influenced people's experiences of time and space. Most formal colonial enterprises were dismantled after World War II. However, postcolonial international relations are highly reminiscent of colonial structures of exploitation, dependency and inequality. Barber (1995) rhetorically dubs "Jihad vs. McWorld" as two opposing tendencies taking shape within contemporary conditions of globalization. These tendencies describe a modernization of colonial practices rather than a replacement of an old order of things. Barber's use of the term "Jihad" is purely metaphorical and describes local forces attempting to resist the invasive "economic, technological, and ecological forces that demand integration and uniformity..., pressing nations into one "McWorld" tied together by communications, information, entertainment, and commerce" (p.4). In contrast, what Barber designates "McWorld" refers to an overarching force of homogenization that pervades all human interaction and increases interdependency according to specific commercialized and anti-democratic logics. States that have gained independence since the purported dissolution of colonial enterprise during the mid-twentieth century have been drawn with arbitrary borders. These states exist as "papier-mâché Mephistopheles" that foster alienation among minority groups (Conrad, 2007, p. 29). This alienation manifests itself in reactionary, anti-democratic, fundamentalist movements which take root among those marginalized and alienated by the homogenizing processes of "McWorld." Such tendencies characterize some Islamic fundamentalist movements, which is why Barber uses the label "Jihad" to describe these patterns. Barber explains the destructive nature to democracy of both extremes in "McWorld vs. Jihad."

The two cases explored in this paper are the Irish Republican Movement, formerly active in Northern Ireland and the Republic of Ireland, and the Lord's Resistance Movement, active in the Republic of Uganda and neighboring

states. This paper applies Barber's (1995) term "Jihad" to the IRM and the LRM for heuristic purposes, although neither are true Islamic jihadist movements. While both the IRM and LRM have surfaced in response to British colonialism, they have yielded different results because of variation in historical context and experience. That is, by comparing the two groups this paper aims to demonstrate that localized and globalized groups can organize in legitimately "jihadist" ways to globalize on their own terms. Localized groups are those active within a particular region and operate with regard to an issue specific to that region. Globalized groups are those active on an international scale and operate with regard to a global issue. This paper synthesizes three theories of globalization (Jihad vs. McWorld, global governance theory, and world culture theory) to explain the success of the Irish Republican Movement in relation to the failures of the Lord's Resistance Movement. Specifically, the IRM has reformed itself along globally legitimized prescriptions, while the LRM has failed to do so.

Theoretical Overview

One theory by itself does not explain the variation that will be illustrated in this article. Therefore, three theories of globalization are used to tease out the different experiences of postcolonial conflict in Uganda and Northern Ireland, including Barber's (1995) theory of "McWorld vs. Jihad," world society theory as described by Meyer, Boli, Thomas, and Ramirez (1997), and Stiglitz' (2002) theory on global governance. First, Barber's theory of "Jihad vs. McWorld" helps explain two oppositional yet dialectical forms of globalization. "Jihadist" movements have surfaced in response to the oppressive policies of "McWorld," a conglomeration of multinational corporations and developed countries. For Barber (1995), the conflict is that of the colonized resisting the

colonizer. "Jihad" describes a movement towards tribalism that "pursues a bloody politics of identity" reminiscent of both pre-colonial tribal affairs and postcolonial rebel groups (p. 8). The image of "McWorld" on the other hand describes a "bloodless economics of profit" by any means (Barber, 1995, p. 8). Since economic incentive largely drove colonial actions, today's economic patterns encompassing the image of "McWorld" are a modern extension of colonialism; "McWorld" seeks to sow its seeds of modernity across the world. The process by which it endeavors to apply its economic and uniform ideals alienates local populations and cultural groups, a similar outcome observed when imperial forces colonized new lands and conquered indigenous populations. In response, "Jihadist" groups work to destroy the forces of "McWorld," but in doing so simultaneously increase the fervor with which "McWorld" implements its uniformity. The net effect is that these two active forces undermine and reinforce each other while subverting states—people simultaneously become citizens of the world and citizens of a "tribe" (Barber, 1995).

One way in which society struggles to balance the tendencies of "Jihad" and "McWorld" is the organization of states within a greater globalized understanding of norms and values. The creation of states follows models prescribed by world society. Meyer, Boli, Thomas and Ramirez (1997) define world society as a collective global understanding of norms and belief; this causes states to follow common political structures and economic policies, whether or not these structures and policies are best suited for the situation. Ireland and Uganda have become sovereign states within the last century, and the effects of the statehood process are still evident. World culture theory is partially derived from Erving Goffman's (1959) theory of dramaturgy, which can account for the isomorphism of states in spite of its traditional use in micro-sociology because world society is simply a larger

scale society; it functions in similar ways to micro-societies. Dramaturgy is a function of the sociological paradigm symbolic interactionism, or the idea that all symbols are ascribed meaning by society, that analyzes interaction through a theatrical metaphor (Appelrouth & Edles, 2008). It describes interaction as performances between individuals, or actors, and these actors display a front that Goffman (1959) describes as "expressive equipment of a standard kind of intentionally or unwittingly employed by the individual during his [sic] performance" (p. 22). World society is the creation of an institutionalized script (Appelrouth & Edles, 2008). Meyer et al. (1997) state that "copying world models or conventions amount to simple mimesis that has more to do with knowing how to fill in forms than with managing substantive problems" (p. 158). This "simple mimesis" is nothing more than following socially prescribed scripts.

Furthermore, stabilization of a state by recognized sovereignty does "not preclude, and might even increase, instability in the state's government" (Meyer et al., 1997, p. 159). This stability is questioned by an individual's understanding of his or her citizenship and loyalties. If an individual considers him or herself part of a nation within a state, rather than the state itself, instability will increase. Recognition of sovereignty from outside states is a manifestation of "McWorld." That is, states will move to recognize other nations as states because statehood is valued by world society. This recognition is a uniform and exogenous standard ignorant of the local culture. Whether or not these individuals view themselves as citizens of a state can lead to "Jihadist" uprisings. World society and "McWorld" are complementary because both are homogenizing forces. World society is the culture that McWorld delivers voluntarily and forcefully; multinational corporations strive to replace the new state's norms and values with those of the state in which

it originated. The deliverance of this culture benefits some states more than others because the interests of McWorld do not always parallel those of the local citizens. For instance, the introduction of fast food may threaten local restaurants, culture, and health. This inequitable distribution of world culture's benefits may be further explained by Stiglitz's (2002) global governance theory.

Stiglitz's (2002) article, "Globalism's Discontents," revolves around the idea "that globalization has meant different things in different places" (p. A16). Because globalization has meant different things in different places, it should be understood that each culture and state have their own set of problems and own set of solutions. This argument is supported by the failure of imposing a universal strategy on developing countries from the outside. The International Monetary Fund (IMF) and the World Bank encourage policies of market liberalization—often characterized by removal of trade barriers, deregulation of markets, elimination of social welfare programs, privatization of public sector industries and erosion of protections for workers and the environment—that tend to benefit the global North and allow it to manipulate the global South to extract maximum profit from it. Moyo (2009) argues a similar point in *Dead Aid: Why Aid is Not Working and How There is a Better Way for Africa*. Referring to loans provided by the IMF and World Bank, which are often provided with many constraints, Moyo (2009) found that "the wall of freely supplied money led to extremely low, and even negative, real interest rates, and encouraged many poorer economies to start borrowing even more in order to repay previous debts" (pp. 15-16). Many countries become shackled to a cycle of debt and borrowing, a state of postcolonial dependency manipulated by the IMF and World Bank to impose certain types of development policies. In Moyo's (2009) analysis of Africa, this is

problematic because it redirects all of Africa's growth to the loan countries while strengthening Africa's dependency on aid in the form of loans and grants. While some in the global South have benefited from market liberalization, others have not, and success has been achieved by countries that have "determined [their] own pace of change" (Stiglitz, 2002, p. A17). Furthermore, prior to IMF and World Bank influence "financial markets were highly regulated . . . those regulations promoted growth. It was only when these countries stripped away the regulations, under pressure from the U.S. Treasury and the IMF, that they encountered problems" (Stiglitz, 2002, p. A17). Stiglitz theorizes that global governance institutions will shape development in the global South in a way that produces more conflict compared to developing states in the global North. Some argue, for example, that development aid has decreased the quality of life in Africa. The "average African [is] poorer today than just two decades ago," and "some 50 per-cent of the world's poor" resides in sub-Saharan Africa (Moyo, 2009, p.5). Stiglitz (2002) argues that when states find a solution to their localized problems, it allows them to experience more of the benefits of globalization. Increasing sovereignty essentially increases equity, which has been the experience in Northern Ireland more than in Uganda.

World culture theory describes an overarching, homogenous force similar in some respects to Barber's (1995) *McWorld*. World culture theory also illustrates that *McWorld* follows a script of domination and argues that a modernization of colonial and imperial actions follows global patterns of legitimacy, as do resistance efforts against homogenizing forces (Meyer et al., 1997). Similarly, Stiglitz's (2002) global governance theory describes the necessity and legitimacy of sovereignty for all states. Essentially, it is this legitimization, or socially-recognized norms and values that

allow states to work against some forces of homogenization while working within others. This legitimization also provides a solution to the mutually reinforcing and destructive forces of "McWorld" and "Jihad." This is done by rewriting the goals or strategies of "Jihadist" movements according to world cultural scripts of formal and instrumentally rational behavior, such as statehood or just war theory, allowing them to work within world culture and redirect their tactics and strategies to find solutions to their set of problems by globalizing on their own terms. Local movements that do so, such as the Irish Republican Movement, are more successful in resolving conflict. According to this logic and the evidence presented below, this paper offers a global explanation to the variance in conflict resolution in Northern Ireland and Uganda: a conglomeration of the three theories illustrates how differences in experience lead to differences in outcome.

Basis for Comparison

In comparison, Uganda and Northern Ireland exhibit more differences than similarities. However, the few similarities are just as important as the differences because they offer a useful analytical point of comparison. Both states experienced colonization as members of the British Empire. Stratification of citizenry, or an organization of the people based on cultural constructs, occurred in both states as a result of colonization. This stratification has fueled the respective movements. Finally, the longevity of both conflicts can be attributed to the fact that both states were unable to establish either legitimate police force or military forces that offered protection for marginalized groups of citizens.

British colonization introduced lasting conflict to both Ireland and Uganda. The Protestant-Catholic discord is a product of British Protestantism gaining control of Ireland in 1690 under King William III (Perry & Gerard-Sharp, 2006).

In Uganda, colonization resulted in the arbitrary drawing of borders around the lands of 13 ethnic groups, with the highest concentration of an ethnicity, the Baganda, comprising approximately 18% of the population. Since 1986, President Yoweri K. Museveni has enacted policies oppressive to various ethnic groups, particularly the Acholi. Museveni belongs to the second-largest ethnic group, the Banyankole (Bureau of African Affairs, 2010). In 1888, the British East Africa Company acquired control of Uganda, and it was not until 1962 that independence from the United Kingdom was granted. During the period of colonization both Ireland and Uganda were subjected to Protestant missionaries; however, only Ireland was flooded by a Protestant migration. The latter is significant because the high concentration of Protestants caused Northern Ireland to withdraw from the Irish State based on Section 12 of the Irish Free State Agreement Act in 1922 (BBC News, 1999). Secession occurred in spite of a large Catholic population. This exogenous governmental decision worsened lives for Catholics in Northern Ireland by removing their claim to land and legitimate rule. In Uganda, none of the ethnic groups have ever been extended an offer to leave the state and exist as a separate sovereign entity. In both cases, these decisions were made by the United Kingdom, acting as an outside, homogenizing force of "McWorld." Active patterns of resistance by the Irish Republican Army and the Lord's Resistance Army are thus not surprising.

In Northern Ireland, to be Catholic is to be second class citizen; in Uganda, to be any ethnicity other than Bagandan or Banyankole also means to be second class citizen. The hostility and tension these citizens face creates feelings of alienation and homelessness. This caused instability to increase exponentially, resulting in the formation of rebellion groups. However, while in Northern Ireland Catholics had not experienced the benefits of citizenship since before

colonization, the Acholi in Uganda had been the ruling class from 1962 until 1986. In both states, other rebellion groups have surfaced. In Ireland, these groups formed in response to the Irish Republican Movement, but in Uganda, the other rebellion groups have existed separately.

The political instability in Uganda inspired Alice Lakwena and Joseph Kony to lead the resistance army. Lakwena and Kony "blamed the sins of the Acholi themselves for almost destroying their group. They both believed that the Acholi were about to be wiped out in massacres and reprisals driving them to look for a spiritual escape" (Jackson, 2009, p. 323). The Acholi are still persecuted, particularly by those who are purportedly protecting them. Jackson (2009) found that members of the Ugandan People's Defense Force "see their service in the north as being virtually in another country" (p. 325). Because of this, they have "been guilty of a series of violations of human rights that fuel bitterness amongst the Acholi, including systematic rape of both men and women, usually in the presence of their families, the murder of civilians and the burying alive of civilians by soldiers" (Jackson, 2009, p. 325). Oppression of the Acholi was further enforced by Yoweri Museveni, who as recently as 2002 "coerced the population into displaced camps, arguing that depopulation of the countryside would allow the government to provide adequate protection from the rebels. . . . [Yet] most of the camps fell far below emergency standards for hygiene and availability of water" (Annan, Brier, & Aryemo, 2009, p. 645).

In Northern Ireland, Catholics were subject to unfair employment, voting and housing restrictions, as well as a number of others. However, one of the most contentious points of disagreement was internment. As Dixon noted, "there was a major escalation of violence following the introduction of internment [without trial] in August 1971. . . . [P]arties began to

contemplate a major reassessment of the conflict and became more sympathetic to the goal of Irish unity" (2009, p. 451).

Internment of Catholics was based on suspicion of Irish Republican support rather than proof of it. Most often, the offense these men had committed was simply being Catholic. Dixon (2009) estimates that one in four Catholic men, between the ages of 16 and 44, was arrested at least once between 1972 and 1977. Furthermore, it was discovered that interrogation techniques used against the Irish Republicans, as well as innocent Catholic citizens, "had been used in previous colonial campaigns: . . . wall-standing, hooding, continuous noise, deprivation of food and deprivation of sleep" (Dixon, 2009, p. 456). All of these techniques have been considered torture by the European Commission on Human Rights and inhuman, degrading treatment by the European Court (Dixon, 2009, p. 459). The army additionally searched Catholic houses excessively. "On average every Catholic household in Northern Ireland had been searched twice, but since many homes would not be under suspicion some houses in certain districts would have been searched perhaps as many as ten or more times" (Dixon, 2009, p. 452). Protestants from all social classes supported the segregation and dehumanization of Catholics:

Even deprived Protestants had an interest in the preservation of the state of affairs, as the Protestant working classes were marginally better off [in comparison with their Catholic counter-part], if only in the sense that they "belonged" to the ruling class. Even for those Protestants who were close to the bottom of the economic heap, it was comforting to know that Catholics, as a class, were worse off. It fed the myth of superiority, of ascendancy,

of exclusivity. Hence Protestants—even the poorest—were in some sense “better.” (Da Fazio, 2009, p. 171)

Both Uganda and Northern Ireland failed in a number of attempts to provide a legitimate state force that could protect its citizens. The Ugandan People's Defense Force (UPDF), in addition to torturing the Acholi peoples, is incapable of fighting the Lord's Resistance Army with any success; the child-based army has always overcome the Ugandan People's Defense Force, most notably because of their disorganization. For example, during an attack on the Lira Palwo camp, Captain Kavuma, the leader of that base, was arrested for his inability to lead the army and “it was alleged his team was ill-prepared and that he failed to radio for help in a timely manner. Additionally, eyewitnesses testified that several of his officers were drunk” (Feldman, 2008, p. 46). Similarly, the Irish Catholics could not count on any of the police forces supported by Northern Ireland that were created to protect them from counterinsurgency groups, such as the Ulster Volunteer Force. The Ulster Volunteer Force and other similar groups delegitimized themselves by acting outside of the Catholic interests. For instance, after imposing the Falls Road Curfew, “the Army was no longer seen as the protector of the Catholic community, recruitment to the IRA accelerated, and the alienation of the Catholic population was now such that it could afford to take offensive action against the British Army” (Dixon, 2009, p. 456).

Variance in Experience, Variance in Outcome

The above similarities between Northern Ireland and Uganda offer a starting point for investigating the differences. Some variances are in the experience of the movement, while others are a product of it. The involvement of religion greatly differs

between the two. While both conflicts are based in ethnicity, the conflict in Northern Ireland is dualistic, or between two groups, and the Ugandan conflict is pluralistic, among many. The level of legitimacy utilized by the movements greatly impacts the tactics they employ and also determines whether or not the perpetrators or the victims will need to undergo some sort of rehabilitation. Finally, while both groups desire sovereignty, the degree of sovereignty they desire is different. The different experience of global forces, described by the theories summarized above, offers an explanation for such variation between Uganda and Northern Ireland. Differences in religiosity, societal structure, daily experiences, and a variety of other factors require different conflict resolutions.

The Irish Republican Army and the Lord's Resistance Army have long carried religious connotations. However, the level of religiosity held by the movements differs because of different experiences. As McMahon (2007) states, "unlike some unionists, the leaders of the IRA did not appeal to their followers by defining the conflict as religious" (p. 354). The Catholic-Protestant problem existed not as a religious disagreement, but as a social hierarchy that did not acknowledge the rights of Catholics in Northern Ireland. Because of this, Irish Republicans held the view that "the representatives of the real enemy did not wear clerical collars and did not preach to rapt congregations. Instead the implacable foe wore everyday business attire and strode the corridors of power in Westminster and Whitehall" (McMahon, 2007, p. 354). Religion was not only ascribed to the conflict but used to create a polarization. World society finds this polarization comparable to tribal warfare in order to legitimize any interference. This follows the script of the benevolent developed world seeking to solve the problems of the less fortunate—a front, or script, institutionalized during the era of colonization.

For the Lord's Resistance Army, religion is inseparable from ideology. In a state that persecuted the Acholi people, Alice Lakwena's call to reject modernity and "retreat to spiritualism based on the traditional cosmology of the Acholi with added biblical elements" appeared legitimate to many Acholi adults (Jackson, 2009, p. 324). Following in her footsteps, Joseph Kony continued Lakwena's armed religious rebellion against the norms of Ugandan culture. He and his followers sought to overthrow President Yoweri Museveni. Rice (2009) notes that even though "the rebels had few guns . . . Kony's most potent weapon did not need bullets. The Holy Spirit was guiding him. Fight beside me and pray hard, pray very hard, and no harm will come to you, he told his followers" (p. 30). Mechanical solidarity fueled by the high degree of religiosity prevented the Lord's Resistance Movement from following world patterns of legitimacy because the norms of the Movement were valued over those embraced by world society.

In contrast to Uganda, where ethnicity determines class, Irish social class was determined by one's religious affiliation. Both armed movements express jihadist-like tendencies because of their opposition to state sanctioned homogenization, but this homogenization varies in form. In Northern Ireland, the Irish Republicans expressed similar tendencies because they continued to fight against an invasive homogenizing Protestant force introduced by colonialism. In Uganda, the rebellion was a reaction to the injustices introduced by "McWorld." First, the United Kingdom forced many tribes into a single land, and second, after decolonization began the arbitrary border drawn around a multitude of tribal land remained unchanged. Because statehood is valued by world society, it appeared to be in the interest of the Ugandan people to remain a state; to dissolve would increase unrest and instability and decrease

development aid. While Moyo (2009) clearly articulated the negative consequences of receiving development aid, world society is a much more pervasive force. Both states displayed the instability Meyer et al. (1997) attributes with newly sovereign states.

Uganda and Northern Ireland both recognized the need to act as sovereign states in solving their domestic issues. However, the governments of Northern Ireland and Ireland pursued a legal approach that works within world culture, rather than against it, while Uganda pursued the opposite. Uganda desired amnesty, rather than persecution for its war criminals, because it would allow the Ugandan people to engage in *Mato Oput*, a forgiveness ritual that has been part of their culture for thousands of years (Ssenyonjo, 2007). Because Northern Ireland chose to work within world society, it was afforded much more sovereignty than Uganda, albeit not completely. The Clinton administration sought to solve Ireland's problems.

Bill Clinton's efforts in resolving conflict in Northern Ireland were a function of world society. He was simply following world society's script of colonialism and imperialism. His efforts did not lead to successful resolution because he was not seen by the population of Northern Ireland or Ireland as a legitimate mediator but rather as a biased puppet; instead, the people of Ireland and Northern Ireland came to peaceful resolution on their own. Dixon (2010) found that "the Clinton administration was far from 'even-handed' in its attitude towards nationalists and unionists, and this partiality towards nationalists was picked up by unionist actors and audiences who were already suspicious of US 'interference'" (p. 217). Unionist leader David Trimble was quoted warning Clinton to stay away from Northern Ireland:

I would certainly prefer it if Bill Clinton arrived here after the referendum rather than before. I would not want people here to feel they are being dictated to be some foreign power or, indeed, that anything improper is being done to influence their decision. (Dixon, 2010, p. 220)

However, the greatest indication of Bill Clinton's inability to participate positively in the resolution became clear when he stated that "growing prosperity and opportunity was being threatened . . . in Northern Ireland . . . by 'ancient hatreds' which manifested itself in a murderous group superiority over neighbours," and when he used the "Irish stereotype of 'drunks' failing to get over '600 years of religious fights' to express his frustration with the progress of the [mediations] in October 1999" (as cited in Dixon, 2010, p. 222). In doing so, he was behaving as other imperialist forces before him, with a lack of cultural relativism. More so, Clinton sought to resolve the conflict by homogenizing populations instead of seeking a solution through peaceful coexistence. Specifically, he completely overlooked the differences in religion and instead focused on the similarities between the groups—both were "drunks" incapable of moving beyond "600 years of religious fights." Essentially, Clinton saw the groups as the same because of these shallow and highly incorrect differences and did not bother to understand the rich differences or utilized them to find a solution.

In Uganda, the desire for sovereignty in peacemaking was greater than it had been in Northern Ireland because the desirable peacemaking process would require defiance of world culture norms. Specifically, Uganda rejected the International Criminal Court's plans to arrest and persecute

the leaders of the Lord's Resistance Army, opting instead to provide amnesty. This was because ritualized forgiveness, or Mato Oput, had to be utilized to instill peace to the troubled culture. However, it could not be practiced if the Lords' Resistance Army's leaders were persecuted. Because this was a violation of the international community's norms and values, they completely rejected Ugandan plans for peace (Ssenyonjo, 2007). The Ugandan goal was to achieve peace and healing through forgiveness, reconciliation, and an end to all violence. This was their definition of justice, and it could not be achieved without mercy or forgiveness and begs engagement of Mato Oput. Ssenyonjo described the ritual as follows:

When a crime is committed against humanity with impunity, the accused or perpetrator must be the first witness against himself or herself. He/she must stand outside the 'Gate of the Village' and tell the people his/her name and names of his/her parents and uncle. He/she also talks about the crime he/she committed and why he/she committed it the way he/she did. After his/her testimony, the elders of the Village immediately take collective responsibility on his/her behalf. After the confession and the culprit's community taking collective responsibility, the elders then perform the rituals of the self-confessed culprit. (Ssenyongo, 2007, p. 374)

Mato Oput could not occur without complete amnesty being granted to all members of the Lord's Resistance Army. The call for amnesty began in the Acholi community and continued to resonate throughout Uganda. The apologies

would be made to the entire community and would be subject to the approval of religious leaders. In the event of the leaders' acceptance of these apologies, "the two parties shall be required to 'bend spears' and formally declare an end to hostilities . . . and drink the juice from the root of the Mato Oput tree as a form of cleansing" (Ssenyonjo, 2007, pp. 374-375). Betty Amongi, a Ugandan member of parliament, stated that the "indictment by the ICC [International Criminal Court] against the LRA's five leaders would not end the conflict in Northern Uganda. She observed that the 'greatest justice to the people who have been suffering for the past 20 years is to have peace'" (as cited in Ssenyonjo, 2007, p. 371).

Engaging in Mato Oput had the potential to be a legitimate form of "Jihad," or local resolution that transcends the inherent problems of McWorld vs. Jihad. However, Mato Oput defies world society. If a "Jihadist" conflict is to achieve its goals, or come to a resolution, it must work within and not against world society. While it was imperative that only the Acholi people determine how justice is achieved, they needed to find a way to act with legitimacy within their own culture and world culture simultaneously. This means that the Ugandan people needed to find peace in a way that satisfies both local and global norms and values. Without a stronger degree of authority, the Acholi people could not resolve this conflict on both a global and a local scale.

The Irish Republican Army largely had the benefit of legitimacy within the Irish Isle. At its advent, the army was actually the army of the Irish State. Over time, the army lost this legitimacy by engaging in armed resistance, but it was able to realize legitimacy again by transforming from an armed rebellion to an informed political movement. It is through this legitimacy that the conflict transformed from a violent rebellion to a political party working through the

government. In contrast, the Lord's Resistance Army had little to no legitimacy. More so, what little legitimacy it had completely vanished as more and more adults abandoned Kony's mission. The tactics employed by the Lord's Resistance Army reinforced the fact that the movement would not be seen as legitimate by world society. That is, according to world society, armed rebellion is not a legitimate form of resistance because there are political avenues that allow for change. However, in Uganda, these political avenues were closed to all ethnic minorities. The Acholi people, who originally supported the effort to overthrow Loweri Museveni's unjust government, abandoned Kony's campaign because of the guerilla army's tactics.

The Irish Republican Army was a terrorist organization, just as the Lord's Resistance Army. However, there were considerable differences between the two organizations' methods of resistance. Irish Republicans targeted government officials, government buildings and counterinsurgents. Citizens were harmed only when they were brought into the conflict by either government or counterinsurgent forces. The tactics included bombings, assassinations, kidnappings, extortion and robberies. The Irish Republican Army managed to work closer to world society's just war theory than the Lord's Resistance Army. Just war theory varies between societies, but there are globally recognized rules: war must be proportional and just (Forge, 2009). This means that force exerted must not exceed that of force received and targets must not be civilians. The Lord's Resistance Army purposefully targeted civilians. Kony abducted children for his army "not only [because] they were easier to indoctrinate, but also because Kony had effectively given up on the adults" (Jackson, 2009, p. 324). He forced these children to fight with him, engaging in animalistic brutality. Victims of the army have reportedly had padlocks forced through their

mouths, lips, ears and noses, had their noses sliced off and been victims of cannibalism (Rice, 2009). Women were forced to beat their infants to death, and children were forced to make the choice of killing their brothers or being killed by their brothers (Rice, 2009). The goal of the group was to maximize casualties, and they were known to “wait for villagers to gather for church services or celebrations before striking” (Rice, 2009, p. 30).

Conclusion

Two key points can be drawn from this paper. First, globalization penetrates and affects local conflicts in different ways. Second, if states can be afforded the right to solve problems on their own terms by determining which global forces should help in conflict resolution, conflict resolutions may be more successful. Movements with “Jihadist” tendencies described by Barber (1995) have become active in most states in the aftermath of colonialism and in response to contemporary globalization processes. However, these movements have achieved vastly different results and experienced very different outcomes due to unique histories of colonialism and globalization. Consequently, there have been clear differences between the Lord’s Resistance Army in Uganda and the Irish Republican Army in Northern Ireland regardless of the fact that both movements were armed rebellions aimed at solving the problems introduced to their cultures and countries by colonialism. Specific differences related to this variance in experiencing globalization included the role of religiosity, degrees of legitimacy in world society, tactics employed by each rebellion, and degrees of sovereignty. Religiosity defined class in Northern Ireland, but in Uganda it fueled the LRM; this hindered the LRM’s ability to embrace world society’s norms and values. Embracing just war theory caused the IRA to legitimize itself in world society. That is, the IRM’s evolution of tactics from militarism to the political

sphere was legitimate locally as well as within world society. Furthermore, the IRA was the official state army at the beginning of statehood; this afforded the armed movement more legitimacy than other armed movements have had. The LRM failed to meet any standards of world society's scripted resolution of conflict or just war theory and thus failed to experience legitimacy by any exogenous norms. The case in Northern Ireland is an example of a third global force, existing between "Jihad" and "McWorld," capable of satisfying both. This third option is dependent on endogenous solutions to local problems within the framework of world culture. If "Jihadist" or "McWorld" groups seek to achieve their goals, they must find overlap between the best local and global solutions available; to avoid either extreme, localized and globalized groups will have to compromise to come to successful and lasting solutions.

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Pre-meal Beverage Intake Affects Hunger, Satiety, and Energy Intake

Robin M. Welcher

Graduate Student, Food and Nutritional Sciences

Abstract

Increased caloric beverage consumption, especially between meals, may lead to weight gain. Therefore, beverages that increase satiety and decrease meal intake may be an effective weight management tool. The purpose of this study was to determine whether consuming orange juice, orange juice with added fiber (wheat dextrin), or 1% milk 30 minutes prior to a meal affects subjective measurements of satiety, hunger, and fullness, and to assess if there was a difference in subsequent energy intake. It was hypothesized that consuming a beverage containing fiber before a meal would significantly decrease feelings of hunger and reduce energy intake compared to a control no beverage preload. Twenty-five college students participated; each subject attended four test meals. After consuming the beverages, the subjects waited for 30 minutes and were given a visual analog scale to rate their hunger, satiety, and fullness. The test meal (oatmeal) was weighed before and after consumption to determine energy intake. The orange juice with added fiber significantly ($p \leq 0.05$) reduced feelings of hunger, increased fullness, and increased satiety compared to no beverage. The amount of oatmeal consumed was not significantly different among the four treatments. Further research is needed to determine if a larger dose of wheat dextrin added to a beverage consumed prior to a meal decreases overall energy intake.

Keywords: energy intake, beverages, fiber, wheat dextrin, satiety, food intake

Recent research suggests that an increase in consumption of caloric beverages may contribute to excess weight gain (Malik, Schulze, & Hu, 2006; Wang, Bleich, & Gortmaker, 2008). Several studies have investigated the effects of different caloric beverages on satiety, hunger, fullness, and energy intake and have concluded that consumption of sweetened beverages results in higher total energy intake due to the calories from the beverage (Tordoff & Alleva, 1990; Raben, Vasilaras, Moller, & Astrup, 2002; Monsivais, Perrigue, & Drewnowski, 2007). Additionally, several other studies have investigated the satiating effects of beverages with similar caloric value (Almiron-Roig & Drewnowski, 2003; DellaValle, Roe, & Rolls, 2005; Harper, James, Flint, & Astrup, 2007; Stubbs & Whybrow, 2003). These studies show that the macronutrient composition of the beverage does not have a consistent effect on satiety, nor have there been significant findings in the comparison of total energy intake among the different beverages. These findings are in contrast to those in solid foods, where protein has a greater satiating effect than refined carbohydrates, which has more of an effect than fat (Hill & Blundell, 1990; Rolls, Hetherington, & Burley, 1988; Weigle et al., 2005). Additionally, it is well supported that consuming solid foods that are high in fiber, enhances satiety and decreases energy intake at a subsequent meal (Flood-Obbagy & Rolls, 2009). However, the satiating effects of consuming beverages with added fiber prior to a meal are not well understood. One study by Tiwary, Ward, and Jackson (1997) compared the satiating effects of orange juice to orange juice with added fiber (pectin) and found that the orange juice with fiber significantly increased the self-

reported satiety of the subjects for up to four hours. Food intake after consuming the beverage was not measured in this study; therefore, it is not clear how adding fiber to a beverage will impact subsequent energy intake at a meal.

The aim of the current pilot study was to establish whether the addition of fiber to a beverage affects satiety and energy intake at a subsequent meal. If research suggests that consuming a beverage with added fiber increases satiety and decreases subsequent energy intake, than the beverage could be considered a weight management tool.

Methods

Subjects

Students from a mid-sized, midwestern state university were recruited to participate in the study. All potential subjects filled out a screening questionnaire prior to participation. The questionnaire assessed the subject's preference for orange juice, milk, and oatmeal (test meal) and asked them to list any known food allergies. Smokers, competitive athletes, students taking medications affecting appetite, and students dieting to gain or lose weight were excluded from the study. The research was approved by the Institutional Review Board (IRB).

Twenty-five students (20 females and 5 males) were recruited as subjects to participate. Students ranged in age from 19-28 years. After obtaining informed consent, a height and weight measurement was taken for each subject and body mass index (BMI) was calculated.¹

Experimental design

This experiment used a randomized cross-over design with repeated measures. Following an overnight fast, each subject attended four test meals of oatmeal with one

of three beverages consumed as a pre-load or a control of no beverage. Subjects were divided into four groups and assigned standard test meal times on the same day of the week for four weeks. The groups were randomized to ensure the subjects were not all receiving the test beverages in the same order.

Foods and Beverages

The beverages were served cold in 236 mL servings, and included Tropicana Pure 100% Orange Juice² and Kemps 1% Milk³. Both the orange juice and the 1% milk provided 110 kcals (461 kJ) per 236 mL serving. To test the impact of consuming a beverage with added fiber on satiety and subsequent energy intake, 6 g of wheat dextrin⁴ were added to 236 mL of orange juice, which provided 140 kcals (586 kJ). Wheat dextrin is a soluble fiber that does not gel when mixed with a liquid. There is minimal research investigating the satiating effects of added wheat dextrin; therefore, an amount comparable to the 5 g of pectin used by Tiwary, Ward, and Jackson (1997) was selected. Additionally, 6 g of fiber were chosen to prevent gastrointestinal discomfort, which might have led to bias during consumption of the test meals had subjects noticed gas or bloating as a result of the ingestion of fiber.

The test meal consisted of oatmeal made from Quaker Oats⁵ sweetened with C&H Pure Sugar Cane golden brown sugar.⁶ For 800 g of dry oats, 80 g of brown sugar was added. Subjects were served a large portion (~624 g) and asked to consume the oatmeal until they had initial feelings of fullness. The oatmeal was weighed (± 0.01 g) before and after consumption. Energy intake was calculated using the Food Processor SQL software program.⁷

Procedures

The subjects were asked to refrain from alcohol consumption and excessive exercise during the 24-h prior to the test meals. Additionally, subjects were asked to refrain from eating or drinking, using toothpaste, mouthwash, or chewing gum, and exercise the morning of the test meal. When the subjects arrived at the sensory evaluation laboratory they were asked if they followed the pre-study guidelines, and if a guideline was not followed, a note was made. The subjects were assigned to an individual cubical in the sensory evaluation laboratory. When the subjects were not given a beverage (control), they were asked to rate their feelings of satiety, hunger, and fullness on a 100 mm visual analog scale (VAS) upon arrival. The VAS had opposite extremes anchored at each end of the horizontal line; for example, to assess hunger, the left end stated "I am not hungry at all" and the right end stated "I have never been more hungry." To assess satiety, the anchors were "I am completely empty" and "I cannot eat another bite." To assess fullness, the anchors were "Not at all full" and "Totally full." A ruler was used to measure the millimeters (mm) from the left end of the VAS to the vertical line made by the subject. If a subject marked a vertical line at the left end of the horizontal line, a value of zero mm was given and if a subject marked a vertical line at the right end, a value of 100 mm was given. After completing the VAS, subjects were given the oatmeal and instructed to eat ad libitum until they experienced initial feelings of fullness. When the subjects received a beverage they were instructed to consume all 236 mL within ten minutes. Once the beverage was consumed, a 30 min timer was set for each individual. At 30 min the subjects were asked to rate their feelings of satiety, hunger, and fullness on a VAS. The oatmeal was then served and the subjects were allowed to eat ad libitum. Once they were

finished eating, all subjects rated the palatability of the oatmeal using a VAS.

Data Analysis

Analysis of variance (ANOVA), one-way repeated measures, was the primary statistical test used to determine the significance of the subjective feelings of hunger, satiety, and fullness. Significance was detected using the sphericity-assumed test and pairwise comparisons to identify which variables were significantly different. ANOVA was also used to analyze the significance of intake by weight (g) during the test meals. Results were considered significant at $p \leq 0.05$. A Bonferroni correction was used for post hoc pairwise comparisons of the means. The data were analyzed using SPSS Statistic 17.0, Release 17.0.0 (August 23, 2008).

Results

Subjects

Twenty-five healthy subjects (males, $n=5$; females, $n=20$) participated in the study. One subject was excluded from the study because of missed attendance at the last test meal. The characteristics of the 24 subjects that completed the study are located in Table 1. Fourteen of the subjects were

Table 1
Subject Characteristics $n = 24$

Characteristic	Mean $\pm$ SE	Range
Age (y)	22.3 $\pm$ 0.5	19 – 28
Height (cm)	166.6 $\pm$ 2.1	151.2 – 186.7
Weight (kg)	66.9 $\pm$ 2.3	51.2 – 92.7
Body mass index (kg/m ²)	24.0 $\pm$ 0.6	19.6 – 29.6

classified as normal weight (18.5-24.9 kg/m²) and the other ten were classified as overweight (25-29.9 kg/m²) according to their BMI. All subjects reported that they followed the pre-study guidelines.

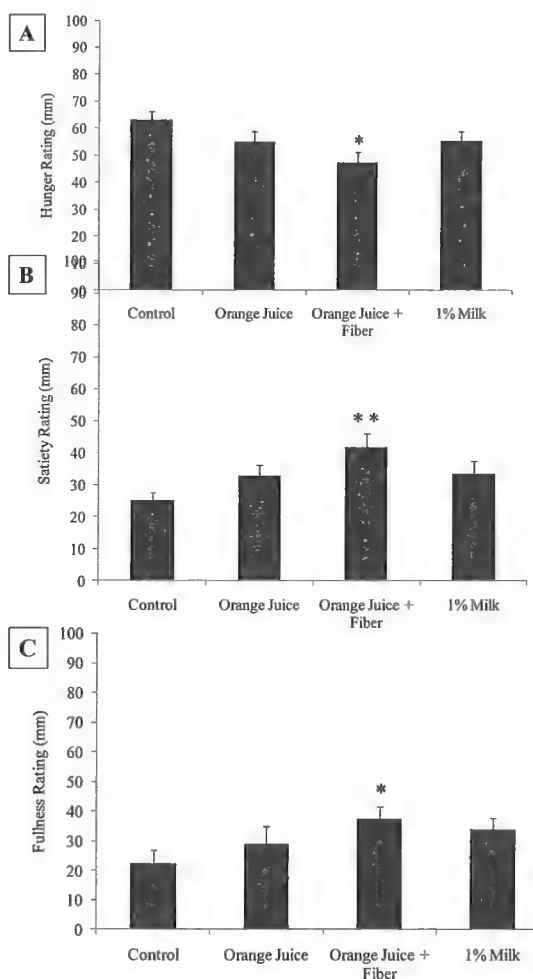


Figure 1. Mean ratings of hunger, satiety, and fullness. After consuming one of three test beverages or no beverage, subjects rated their feelings of hunger (A), satiety (B), and fullness (C) using a 100 mm Visual Analog Scale. The Sphericity Assumed test was used to measure the significance. * $p \leq 0.05$ and ** $p \leq 0.01$ compared to a control of no beverage.

Ratings of Hunger, Satiety, and Fullness

Group ratings of hunger, satiety, and fullness are displayed in Figure 1. Thirty minutes after consumption of orange juice with 6 g of fiber, mean ratings of satiety (41.83 ± 20.72 mm) and fullness (37.58 ± 20.18 mm) were significantly higher ($p \leq 0.01$ and $p \leq 0.05$, respectively) compared to the control of no beverage preload (25.19 ± 12.46 mm and 22.25 ± 16.61 mm for satiety and fullness, respectively). The mean ratings of hunger after the consumption of the fiber supplemented juice (47.48 ± 18.49 mm) was significantly lower ($p \leq 0.05$) than the control (63.00 ± 16.79 mm). There were no significant differences between the other beverages with regards to hunger, satiety, or fullness.

Table 2

Food and Energy Intakes of the Test Meals with and without the Beverage Pre-load Energy Contribution (Mean + SE)

	Control	Orange Juice	Orange Juice + Fiber	1% Milk
Test meal intake				
Energy (kcal)	476 ± 35	463 ± 35	435 ± 31	444 ± 27
Energy (MJ)	1.99 ± 0.15	1.94 ± 0.15	1.82 ± 0.13	1.86 ± 0.11
Weight (g)	299.9 ± 21.9	292.0 ± 22.3	273.9 ± 19.2	279.8 ± 17.0
Total energy intake (preload + test meal)				
Energy (kcal)	476 ± 35	573 ± 35	575 ± 31	554 ± 27
Energy (MJ)	1.99 ± 0.15	2.40 ± 0.15	2.41 ± 0.13	2.32 ± 0.11
Weight (g)	299.9 ± 21.9	361.0 ± 22.3	362.3 ± 19.2	349.0 ± 17.0

Subsequent Food Intake

As shown in Table 2, there were no differences between the four treatment groups with regards to the gram amount or energy content of the test meal that subjects consumed.

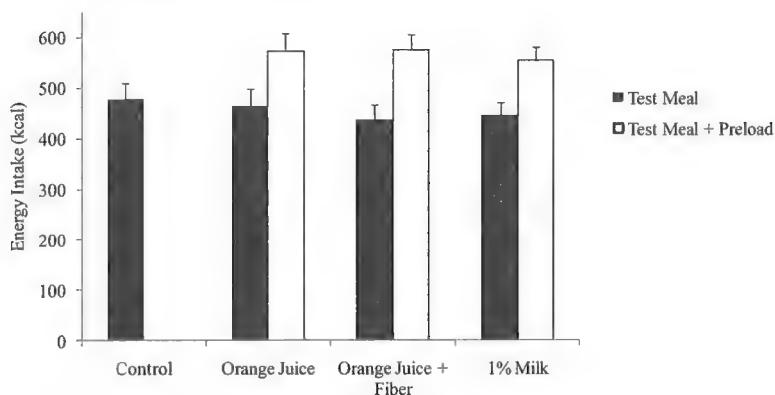


Figure 2. Mean energy intake of test meal and total energy intake. Energy intake of the test meal (filled squares) and total energy intake (test meal + beverage preload, open squares) was calculated using the Food Processor SQL software program (ESHA Research, Salem, OR, USA).

When combining gram weight of the beverage preload with the gram weight of the test meal, there were no significant differences among the four treatment groups (Table 2). Additionally, when the energy content of the beverage preload was combined with the energy content of the test meal, there were no significant differences among the four treatment groups (Figure 2). These data suggest that although the addition of fiber to orange juice increased subjective feelings of satiety (Figure 1), the effect was not dramatic enough to decrease subsequent food intake.

Discussion

Several studies have analyzed the effects of beverages including colas, water, juice, and milk on energy intake, satiety, hunger, and fullness (Almiron-Roig & Drewnowski, 2003; Davy, Dennis, Dengo, Wilson, & Davy, 2008; DellaValle, Roe, & Rolls, 2005; Harper, James, Flint, & Astrup, 2007; Van Walleghe, Orr, Gentile, & Davy, 2007). Based on the review of available literature, there are limited data comparing the

effects on satiety and food intake of a caloric beverage with added fiber to other caloric beverages. The current study was designed to analyze the differences in satiety, hunger, fullness, and subsequent energy intake in college-aged students after consumption of a caloric beverage with added fiber. Orange juice, orange juice with fiber (wheat dextrin), 1% milk, or a control of no beverage was given 30 minutes prior to a meal of oatmeal. Before the oatmeal was served, the subjects rated their satiety, hunger, and fullness on a visual analog scale (VAS). The oatmeal was weighed in grams before and after consumption and the intake was recorded. Compared to the control of no beverage, the orange juice with added fiber statistically increased subjective measures of satiety and fullness and decreased subjects' perceptions of hunger. These increased feelings of fullness and satiety resulted in a decreased subsequent food intake, with the subjects consuming the least amount of oatmeal after the consumption of the juice with fiber; however, these results were not significant.

Based on the results of the current study, it can be concluded that adding a fiber supplement to a beverage will increase subjective feelings of satiety and fullness and decrease hunger compared to a control of no beverage. These findings are similar to those of Tiwary, Ward, and Jackson (1997), who showed that at least 5 grams of fiber (pectin) added to orange juice, significantly decreased hunger and increased satiety. In the present study, increased feelings of fullness and satiety after consuming orange juice with added fiber did not lead to a decrease in subsequent energy intake. These results are in contrast to those of Flood-Obbagy and Rolls (2009), who found when preloads of apple, applesauce, apple juice, or apple juice with added fiber were given prior to an ad libitum meal, subsequent energy intake was significantly lower compared to the control regardless of the type of preload. In the current study, when the energy content of the beverages was factored

in, the subjects consumed the least amount of total kilocalories when they were not given a beverage, and the most kilocalories when given orange juice (with or without fiber) as a preload. Therefore, the reduced intake of oatmeal after consuming the orange juice with fiber was not enough to compensate for the higher caloric value of the beverage.

A major difference between the present study and those of Tirwary et al. (1997) and Flood-Obbagy and Rolls (2009), is that both Tirwary et al. and Flood-Obbagy and Rolls used pectin, while the present study used wheat dextrin. Wheat dextrin is similar to pectin in that it is a soluble fiber; however, wheat dextrin is less viscous and does not gel as readily when mixed with a liquid (Slavin et al., 2009). The less viscous nature of wheat dextrin compared to pectin could partially explain the lack of statistical significance with regards to subsequent food intake. Additionally, a post-hoc sample size calculation indicated a sample size of 46 subjects was needed for an 80% chance of detecting a true difference in energy intake between the beverage variables.

Previous research conducted by Sandhu, El Samahi, Mena, Dooley, and Valenzuela (1987) determined that a dose of 15 grams of pectin fiber added to 400 mL of 10% glucose solution can decrease subsequent energy intake. These authors concluded that pectin increased the viscosity of the meal, which in turn delayed gastric emptying and enhanced feelings of satiety; it is possible that with a larger dose of fiber our subjects may have reduced their energy intake to a greater degree. However, fifteen grams were not used in the current study because of the limited research regarding the gastrointestinal effects of wheat dextrin. Our subjects were blind to the fiber component and a potential threat to validity may have existed if subjects who received the fiber during the first test meal experienced gastrointestinal discomfort.

Orange juice with fiber might promote a higher satiety rating and would result in less subsequent food and energy intake due to fiber's ability to delay gastric emptying through the actions of the satiety hormones pancreatic polypeptide and cholecystokinin (Di Lorenzo, Williams, Hajnal, & Valenzuela, 1988; Kissileff, Pi-Sunyer, Thornton, & Smith, 1981). Another possible explanation for the fiber not showing a significant decrease in subsequent energy intake may be that the 30 minute period between consuming the beverage preload and the test meal was not long enough for the fiber to fully affect the release of satiety hormones. However, it is important to note that the fiber used in this study, wheat dextrin, has not been extensively studied; therefore, the conclusion that the fiber causes secretion of satiety hormones or a delay in gastric emptying cannot be made with confidence.

Results from the current study suggest that there are no differences in perceptions of hunger, satiety, and fullness between preload beverages of milk, orange juice, and orange juice with fiber. These findings are similar to those of Almiron-Roig and Drewnowski (2003), who found no significant difference in perceptions of hunger, satiety, and fullness between orange juice, 1% milk, and cola. Additionally, DellaValle, Roe, and Rolls (2005) investigated the effects of orange juice, 1% milk, regular cola, diet cola, and water on feelings of hunger and satiety in subjects 18-60 years of age, and found no significant difference in hunger and satiety perceptions between the beverages. Contrary to these findings, Harper, James, Flint, and Astrup (2007) found a 500 mL preload of milk to increase feelings of fullness and decrease feelings of hunger more so than cola. This data confirms that, when consumed in standard serving sizes, beverages do not have a macronutrient hierarchy. However, *trends* from the current study combined with the previous findings of Harper, James, Flint, and Astrup (2007) suggest that a complex

carbohydrate (fiber) may have greater effects on satiety than protein (milk), and protein may have a greater effect than the simple carbohydrate (orange juice). More research is needed to confirm if there is indeed a macronutrient hierarchy with regards to satiety in beverages.

The current study has some methodological limitations. One limitation is that the subjects were not asked to rate their feelings of hunger, satiety, and fullness prior to receiving the beverage. Therefore, it is not clear whether there were differences in subjective feelings of hunger prior to consumption of the beverages, which may have impacted the results. However, the subjects were requested to maintain a consistent eating and physical activity pattern 24 hours prior to the test meals; therefore, it is assumed that the subjects likely had similar levels of hunger from week to week. A second limitation is that when the subjects were not given a beverage, they were not asked to wait 30 min prior to rating their perceptions of hunger, satiety, and fullness. It is expected that if subjects waited an additional 30 min, their feelings of hunger would have increased, and their feelings of satiety and fullness would have decreased. While this may have strengthened our differences in subjective measurements of satiety, fullness, and hunger, waiting an additional 30 min may have caused subjects to consume more of the test meal. Consequently, it is possible that the potential energy intake in the control group that did not receive a beverage was underestimated.

In conclusion, consuming a sweetened beverage with 6 g of added wheat dextrin increases subjective measures of satiety and fullness, and decreases hunger compared to a control of no beverage, but it does not significantly impact energy intake at a subsequent meal. Additional research is needed to determine if a larger dose of wheat dextrin, added to a beverage consumed prior to a meal, decreases overall energy intake and promotes energy balance.

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 - 2 Tropicana Manufacturing Company, Inc., Bradenton, FL, USA
 - 3 Kemps LLC, St. Paul, MN, USA
 - 4 Benefiber®, Novartis Consumer Health, Inc., Parsippany, NJ, USA
 - 5 The Quaker Oats Company, Chicago, IL, USA
 - 6 Domino Foods, Inc., Yonkers, NY, USA
 - 7 ESHA Research, Salem, OR, USA

University Alcohol Policy and Student Attitudes

Maxwell Perkins

Undergraduate Student, Human Development and Family Studies

Jessica Bord

Undergraduate Student, Human Development and Family Studies

Abstract

The problems associated with high-risk drinking affect campus and community health, safety, and academic functioning (Lavigne, Francione-Witt, Wood, Laforge & DeJong, 2008). This non- random pilot study examined gendered relationships between university alcohol policy and student attitudes by surveying 87 male and female college students at a midwestern college. Survey data was statistically analyzed using frequencies, cross-tabulations, mean comparisons, independent t-tests, and a reliability analysis. It was hypothesized that female students would be more prone to have alcohol policy affect their attitudes towards drinking. It was also hypothesized that females would perceive alcohol policy affecting their peers' behavior to a greater degree than males. Results found significant gender differences which supported these hypotheses. It was also hypothesized that there would not be gender differences regarding drink specials and the availability of alcohol increasing the likelihood to drink. Results did not support this; significance testing indicated females are more likely to let the availability of alcohol affect their drinking behavior. The implications for practitioners include the need for university administration to form partnerships with all those affected by problem drinking in order to allow a

more comprehensive and inclusive policy. Future research would benefit from examining policy formation, the level of student involvement, and student attitudes toward punitive aspects of policy.

Keywords: problem drinking, high-risk drinking, university alcohol policy

The intellectual potential of our university is being destroyed by problem drinking. According to a study by *The American Journal of Drug and Alcohol Abuse*, 66% of college presidents feel problem drinking is an issue at their universities. The issues associated with problem drinking affect student and community-level health, safety, and academic functioning (Lavigne, Francione-Witt, Wood, Laforge, & DeJong, 2008). University policies that attempt to decrease problem drinking have been implemented with varying degrees of success on university campuses. This pilot study hopes to strengthen alcohol policy by helping administration better understand student attitudes. By sampling students at a small, rural midwestern state university campus, and while utilizing an in-person survey, this study investigated the gendered relationship between university alcohol policy and student attitudes.

Literature Review

A review of existing literature was performed to study the significance between the attitudes of college students regarding alcohol policy. The literature review examined what policy measures and prevention programs are most effective forms of alcohol-control policies on college campuses. Zakocs et al. (2008) investigated what environmental factors, within and outside of a college

campus, assist or hinder alcohol prevention partnership. Five four-year colleges took part in the case study. The study attempted to determine the level of partnership between the university and the outside community and its institutions. The study revealed that some factors are important contributors to creating helpful partnerships: college staff who work as community organizers and high-level administrators who champion community partnerships. The study determined that an administrator should hold the position of advocate and organize the community in order for the university and community better work together. Having a campus advocate can help a college implement its policy by working with important outside organizations like tavern owners or Greek systems. Zakcos et al. pointed to unilateral action when it comes to the implementation of alcohol policy, which means having all members of a community act together as one

DeJong et al. (2007) examined students' support for alcohol policies and strategies implemented by campuses to reduce problem drinking. The study used a random sampling of 32 four-year campuses. Students were sent the Survey of College Alcohol Norms and Behavior (SCANB) annually for five years. All 32 of the colleges participated in the Social Norms Marketing Research Project (SNMRP). The SNMRP determines the success of social norms marketing effects on problem drinking. The study found that when a student indicated support for a policy, the same student would indicate that others would not support the said proposal. The study also suggested that administration should not just presume students will refuse to support policy. The study recommended university administration conduct a survey regarding students' level of support for alcohol policies. The result of such a study may help illustrate to students that many of the policies are supported by their peers, empowering them to publically speak up regarding their

support for tougher policy (DeJong et al., 2007).

Rhodes et al. (2005) conducted a study examining the connections between alcohol policies enforced by administrators of historically black colleges and, students' understanding of alcohol policies, and reports of binge drinking. The study determined some such factors as gender and ethnic differences that strongly influence student consumption of alcohol. Environmental characteristics, such as alcohol prices and the accessibility of alcohol, also greatly impact campus drinking. Rhodes et al. found that administrators try to resolve this major issue by enforcing many policies, including campus alcohol bans, beer kegs bans, limitations on the maximum amount of drinks per student, and different alcohol-free activities. The extent of campus drinking policy differed with the varying perceptions of administration regarding students' alcohol use (Rhodes et al., 2005).

Sheffield et al. (2005) on the other hand measured binge drinking on community college campuses and alcohol problems encountered by campus community. Their study discovered that heavy drinking on college campuses has a damaging influence on non-binge consumers; 77% of non-binge drinking students reported at least one secondhand effect of others' abuse of alcohol. Other research examined in the literature review largely focused on alcohol use and prevention strategies concerning four-year universities; yet, this study concentrated on combined samples from vocational, technical, junior, and community colleges. Sheffield and his colleagues concluded that the rate of binge drinking and its connection with unsafe behavior remains largely unknown amongst community college students due to lack of research.

Wagenaar et al. (2004) believe the solution to avoiding alcohol-related problems is to have public and institutional

policies which may decrease the rates of "high-risk" drinking." Wagenaar et al. found that college students who lived off-campus were less likely to be influenced by the college alcohol policies. Furthermore, they identify several suggestions to help decrease alcohol problems on college campuses: getting rid of happy hours or any other kind of promotion, raising taxes on alcohol, reducing the number of alcohol retail business, and refusing sales to anyone who is under the age of 21 and/or is displaying noticeable signs of intoxication (Wagenaar et al., 2004).

Considering existing literature, problem drinking is clearly an ongoing issue on four-year college campuses; between 34%- 47% percent of students participate in problem drinking (Sheffield et al, 2005). Environmental factors that facilitate or impede administrative policy measures have also been identified, including stakeholder development, working governance, and written governance procedures. Existing literature shows the need for administration to partner with community members as well as students in the implementation of alcohol policy. The current study seeks to better understand the effect of alcohol policy on a small, rural campus and to investigate whether there are gender differences among the student sample.

Theoretical Framework

The Ecological Theory of human development serves as the theoretical framework for this study. Ecological Theory states that there is interplay between the psychological characteristics of a person and of a specific environment; one cannot be defined without the other (Boss, Doherty, LaRossa, Schumm, & Stienmetz, 1996). This theory focuses on studying interrelationships among subsystems, in particular, during transition periods. There are five systems within the Ecological Theory: the microsystem

which refers to the immediate environment the individual lives; the mesosystem referring to the connection between the immediate environments; the exosystem, an external environment that one does not control but whose effects are felt; the macrosystem which includes cultural contexts such as values and laws, and the chronosystem which is the change and transition of environment throughout life. For example, regulations such as an institution's alcohol policy may also affect the actions of the individual in the individual's microsystem; Ecological Theory suggests that the interplay between one's subsystems, such as one's school life and home life, influences the individual.

The Ecology Theory of human development supports the idea that the rules of an institution affect the lives of individuals within that institution. This theory predicts that clear university alcohol policy could help reduce the frequency of alcohol abuse by all students.

Purpose Statement

The three main objectives of this study are (1) to examine the gendered relationship between University alcohol policy and attitudes of the students by sampling students in a midwestern state university, (2) to develop a survey tool to measure attitudes of university students towards alcohol policy, and (3) to increase the understanding of the effects of alcohol policy on a small rural campus, including whether there are gender differences among the student sample.

The central research question of this study was "What is the gendered relationship regarding university alcohol policy and student attitudes?" Based on the literature, we hypothesized that female students would be more prone than male students to have alcohol policy affect their attitudes; in addition, we suspected that students' perception of the effect of alcohol policy on their peers would differ, with females

indicating that policy affects peer's behavior. Based on the Ecology Theory, we furthermore theorized that the presence of outside environmental forces, such as taverns and drink specials, would affect both genders equally, increasing both genders' likelihood to drink

Method

Participants

The study took place at a university in northwestern Wisconsin. The participants were 87 undergraduate students in human development and family studies courses, an English course, and an applied science course. Of the 87 participants, 31 were male and 56 were female. There were three participants between the ages of 18-19, forty seven participants between 20-21, twenty five participants between 22-23, six participants between 24-25, and six participants were 26 years and older. There were four participants who were sophomores, 27 who were juniors, and 56 of the participants were seniors. There were ten participants who lived on campus and 77 who lived off-campus.

Research Design

The function of this survey research was to be able to generalize to a comparable, larger population so that some inferences could be made about characteristics, attitudes, or behaviors of this population of male and female college students (Babbie, 1990). The survey design type used can be best explained as a cross-sectional study design which was utilized to capture knowledge from male and female college students at one point in time. The form of data collection was self-administered questionnaires. The reasoning for using this method was that it was the most proficient type of method in order to collect the data on campus due to convenience, low cost, and quick return of data. The

university student population made up the population of the study; the sample was male and female students in the Human Development and Family Studies Department, Engineering and Technology Department, and in the English and Philosophy Department. The study used a non-random design in order to be inclusive in the classroom. The study used purposive sampling because the purpose of the study was to examine the relationship of gender and the impact university alcohol policy has on students' attitudes. In order to achieve an equitable number of male and female students, data was gathered from departments based on the male to female ratio of each classroom. The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

In order to examine the attitudes of college students towards university alcohol policy, a survey was constructed. The survey included a brief description of the study with an implied consent, definition of any terms not commonly known, risks and benefits, time commitment, confidentiality, voluntary participation, contact information for the research team and the supervisor, and instructions for completing the survey.

The survey contained four demographic questions associated with gender, age, academic status, and living arrangements. Participants were given nine closed-ended statements based on a 5-point Likert Scale, measuring the intensity of the respondents' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). Questions were informed by literature and theories regarding gender and attitudes toward university alcohol policy.

Both face validity and content validity made up the survey instrument. The instrument questions as well as the research questions shared a logical connection to the concept; this

was the face validity. The questions asked in the survey were literature-based, and it was determined that the questions showed a clear connection between gender and attitudes towards the university alcohol policy. Content validity refers to whether the instrument statements' appropriately covered the breadth of concepts under the larger topic.

The questions addressed had a broad range of issues regarding the attitudes towards university alcohol policy. The survey was piloted to five college students to increase validity and ensure that the survey was clear and ready for distribution. Some students felt their own institution's alcohol policy should be defined; therefore, a copy of the university alcohol policy was added to the survey. In addition, the variable AUP, which measures the participants' familiarity with university alcohol policy, was adjusted to read "I was familiar with the university alcohol policy before reviewing the policy handout today."

Procedure

Data was collected from two human development and family studies courses, an English course and an applied science course. Purposive sampling was used to ensure proportionate numbers of male or female students. Randomization was not used in order to be inclusive in the classroom. The implied consent was read aloud to the students. After the researchers and the professor left the classroom, surveys were completed and placed in an envelope and sealed to guarantee participants' anonymity. This procedure was followed exactly the same for all surveyed classes.

Data Analysis Plan

The data collected was cleaned and checked for missing data. The cleaned surveys were coded and acronyms were used for each variable. The measured demographics included

age (AGE), gender (GEN), academic status (ACS), and living arrangements (LIA). The only independent variable on the survey was gender (GEN), which was the category used to compare groups with. Each survey statement was a dependent variable and assigned an acronym *I was familiar with the university alcohol policy before reviewing today* (AUP); *My awareness of the alcohol policy affects my own drinking behavior* (SAP); *The university alcohol policy is an effective tool in preventing problem drinking on campus* (UPE); *The university alcohol policy helps to decrease problem drinking among my peers* (PAP); *Harsher enforcement of university alcohol policy affects my drinking behaviors* (HEF); *Student input has been asked for regarding ideas on how to decrease problem drinking on this campus* (STI); *Student input is taken seriously on this campus regarding the alcohol policy* (SIS); *As a student, I would like to be more involved in the rule making process regarding alcohol policy* (MIV); *Drink specials and the availability of alcohol affect my consumption* (OCE).

The data-analyzing program called the *Statistical Package for the Social Sciences* (SPSS) was used to analyze the data. The individual was used as the level of analysis. The data analysis included the following calculations frequencies: cross-tabulations, mean comparisons, and independent t-tests. This was a result of the groups being compared by gender. A Cronbach's Alpha reliability analysis was also conducted.

Results

The first analysis run was a frequency distribution analysis. This analysis indicated that there was no data missing from the surveys. In addition, cross-tabulations were run with the independent variable, GEN. For STI, PAP, SIS, UPE, HEF, and SAP, there appeared to be no difference between groups, with the majority of males and females

having disagreed and/or strongly disagreed. For MIV and AUP there were no difference between groups with the majority of males and females having agreed and/or strongly agreed. For OCE, a difference was found, with more males disagreeing and/or strongly disagreeing, while the majority of females agreed and/or strongly agreed. There were also several variables with high numbers of undecided response' rates. That is, for PAP and SIS, females' undecided responses were over 20%. For OCE male undecided responses were over 20%. For MIV and STI both male and female undecided responses were over 20%.

An independent samples t-test was run to compare mean scores for males and females. Significant differences were found between the both genders in SAP, UPE and OCE.

A reliability analysis was run to indicate whether variables were a reliable index to measure the major concept, the gendered relationship between university alcohol policy and students' attitudes. Cronbach's Alpha, a measure of reliability, was 0.730. This value indicates that survey items were a reliable measure of the major concept. If the variable MIV would be removed, the reliability would rise to 0.782.

Discussion

The hypothesis that female students would be more likely than male students to have alcohol policy affect their attitudes is supported by the data, with significant mean differences indicating that females' awareness of alcohol policy is more likely to affect their drinking behavior. The majority of males and females indicated that they were familiar with the university alcohol policy; however, the majority of males and females both disagreed or strongly disagreed about their awareness of the policy affecting their drinking behaviors. The significant mean differences indicate that females are more likely to let awareness of policy affect behavior. The

Table 1
Cross Tabulations

AUP

GEN	SD	D	U	A	SA	Total
Male	6.5%	19.4%	16.1%	25.8%	32.3%	100.0%
Female	7.1%	17.9%	17.9%	44.6%	12.5%	100.0%

SAP

GEN	SD	D	U	A	SA	Total
Male	45.2%	35.5%	6.5%	3.2%	9.7%	100.0%
Female	17.9%	32.1%	16.1%	32.1%	1.8%	100.0%

UPE

GEN	SD	D	U	A	SA	Total
Male	54.8%	29.0%	3.2%	6.5%	6.5%	100.0%
Female	21.4%	30.4%	17.9%	25.5%	5.4%	100.0%

PAP

GEN	SD	D	U	A	SA	Total
Male	48.4%	35.5%	3.2%	9.7%	3.2%	100.0%
Female	25.0%	39.3%	21.4%	14.3%	0.0%	100.0%

HEF

GEN	SD	D	U	A	SA	Total
Male	58.1%	19.4%	6.5%	3.2%	12.9%	100.0%
Female	23.2%	39.3%	12.5%	17.9%	7.1%	100.0%

STI

GEN	SD	D	U	A	SA	Total
Male	41.9%	12.9%	32.2%	6.5%	6.5%	100.0%
Female	16.1%	32.1%	26.8%	23.2%	1.8%	100.0%

SIS

GEN	SD	D	U	A	SA	Total
Male	45.2%	29.0%	19.4%	.0%	6.5%	100.0%
Female	21.4%	39.3%	23.2%	14.3%	1.8%	100.0%

MIV

GEN	SD	D	U	A	SA	Total
Male	22.6%	9.7%	25.8%	16.1%	25.8%	100.0%
Female	8.9%	14.3%	25.0%	32.1%	19.6%	100.0%

OCE

GEN	SD	D	U	A	SA	Total
Male	48.4%	12.9%	25.8%	12.9%	.0%	100.0%
Female	26.8%	16.1%	12.5%	39.3%	5.4%	100.0%

Table 2
Compare Means

GEN	AUP	SAP	UPE	PAP	HEF	STI	SIS	MIV	OCE
Male:									
Mean:	3.58	1.97	1.81	1.84	1.94	2.23	1.94	3.13	2.03
SD:	1.31	1.25	1.19	1.10	1.41	1.26	1.12	1.50	1.14
Range:	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.00
Female									
Mean:	3.38	2.68	2.63	2.25	2.46	2.63	2.36	3.39	2.80
SD:	1.40	1.16	1.23	1.00	1.24	1.07	1.03	1.22	1.35
Range:	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Note. (GEN)=Gender of participant; (AUP) = I was familiar with the university alcohol policy before reviewing today; (SAP)= My awareness of the alcohol policy affects my own drinking behavior; (UPE)= The university alcohol policy is an effective tool in preventing problem drinking on campus; (PAP)= The University of Wisconsin-Stout alcohol policy helps to decrease problem drinking among my peers; (HEF)= Harsher enforcement of University of Wisconsin- Stout alcohol policy affects my drinking behaviors; (STI)=Student input has been asked for regarding ideas on how to decrease problem drinking on this campus; (SIS)= Student input is taken seriously on this campus regarding the alcohol policy; (MIV)= As a student, I would like to be more involved in the rule making process regarding alcohol policy; (OCE)= Drink specials and the availability of alcohol effect my consumption.

female mean for the variable *My awareness of the alcohol policy affects my own drinking behavior* (SAP) was 2.68 while the mean was 1.97 for males.

At the beginning of this study, we had also hypothesized that females would be more likely to perceive alcohol policy affecting their peers' behaviors; this claim was also supported by the data. Significance tests indicate females are more likely than males to view alcohol policy as an effective tool in preventing problem drinking. The female mean for the variable *The University of Wisconsin-Stout alcohol policy helps to decrease problem drinking among my peers* (PAP) was 2.25, whereas the males mean for the same variable was 1.84.

Table 3
Independent T-tests

Variable	Gender		T	df	Sig.
	Males	Females			
SAP	1.97 (1.25)	2.68 (1.16)	-2.60	58.23	*0.012
UPE	1.81 (1.19)	2.63 (1.23)	-3.03	63.55	**0.004
OCE	2.03 (1.14)	2.80 (1.35)	-2.82	71.41	***0.006

Note. (GEN)=Gender of participant; (AUP) = I was familiar with the university alcohol policy before reviewing today; (SAP)= My awareness of the alcohol policy affects my own drinking behavior; (UPE)= The university alcohol policy is an effective tool in preventing problem drinking on campus; (PAP)= The University of Wisconsin-Stout alcohol policy helps to decrease problem drinking among my peers; (HEF)= Harsher enforcement of University of Wisconsin- Stout alcohol policy affects my drinking behaviors; (STI)=Student input has been asked for regarding ideas on how to decrease problem drinking on this campus; (SIS)= Student input is taken seriously on this campus regarding the alcohol policy; (MIV)= As a student, I would like to be more involved in the rule making process regarding alcohol policy; (OCE)= Drink specials and the availability of alcohol effect my consumption.

**Correlation is significant at the $p < .01$, *Correlation is significant at the $p < .05$

The third part of the hypothesis theorized that outside environmental forces such as drink specials would have an equal effect on both genders increasing their likelihood to drink. The data does not support this hypothesis. In fact, the data suggests that females are more affected by outside forces such as advertising and price behaviors by taverns than males.

Statistical significance of $p < 0.01$ level and $p < 0.05$ were

found for three of the variables. There was a significance of $p < 0.01$ level for the variable that dealt with students' perceptions of alcohol policy. The question asked whether students viewed policy as an effective tool in preventing problem drinking; the t-test indicated females are more likely to view policy as an effective tool. The significance of $p < 0.01$ was also found in the variable that dealt with the availability of alcohol or drink specials and whether these specials affected students' consumption of alcohol. The data does not fully support existing literature that claims environmental changes would affect drinking habits of both genders. Some environmental suggestions in the literature include eliminating happy hours or any other kind of promotion, raising taxes on alcohol, reducing the number of alcohol retail businesses, and refusing sales to anyone under the age of 21 as well as anyone who displays signs of noticeable intoxication (Wagenaar et al. 2004). Data from the Wagenaar et al. study suggests that drink specials as well as the availability of alcohol would not affect males' consumption. However, our data indicates that these environmental suggestions may indeed affect females' consumption because the majority of females agreed that drink specials and alcohol availability affect their consumption.

For the study's variable dealing with whether students feel that alcohol policy affects their behavior, a significance of $p < 0.05$ was measured. This suggests that males and females are more likely to let alcohol policy affect their drinking behavior. This data is not supported by the Ecological theory, which proposes that the policies of surrounding institutions have an effect on the individual (Boss et al., 1993).

The cross-tabulations' table reveals several interesting findings. A majority of students either disagreed or strongly disagreed that their awareness of alcohol policy affects their drinking behavior. The data supports the environmental

management prevention approach, which states that decisions students make about the use of alcohol shape their environment. Therefore, the most effective way to reduce problem drinking in the campus community is to change the students' environment (DeJong et al., 2007). With both males and females indicating that alcohol policy does not affect their behavior, a more comprehensive environmental approach to lowering the risks of high drinking may be more appropriate than policy alone.

A majority of students disagreed or strongly disagreed that their input has been requested regarding ideas on how to decrease problem drinking on campus. Zakocs et al. (2008) found that instead of administrators focusing solely on written governances, administration should work to form a partnership with the student body. When partnerships achieve cultural change on campus, rates of students' heavy drinking and alcohol-related consequences decrease. By creating a partnership with students and giving them a voice in the formation and execution of alcohol policy, administration may notice students taking a less oppositional stance toward alcohol policy. Thus, students may feel more responsible for the policy formation and less as a target of the policy.

A majority of students disagreed or strongly disagreed about whether their input in alcohol policy making is taken seriously on campus. In order for students to feel that their input can make a significant difference in regards to an alcohol policy, the campus community should work together to form the most effective policy possible. Creating stakeholders in the policy process is an important part of showing students they have something to gain from the success of the policy (Zakocs et al., 2008).

A majority of students agreed or strongly agreed that they would like to be more involved in the rule-making process regarding alcohol policy on campus. In order to gain accurate

information on students' insights, administrators should survey students based on their personal views of alcohol policy rather than relying on their general impressions or the opinions of vocal opponents to tougher policies (DeJong et al., 2007). Knowing the feelings, concerns, and opinions of those targeted by policies is also important. While aforementioned variables suggest students do not regard themselves as stakeholders in the policy-making process, the answers to variable MIV, which states "*As a student, I would like to be more involved in the rule making process regarding alcohol policy,*" suggests that they in fact would like a greater voice in the rule making process.

A majority of male and female students disagreed or strongly disagreed on the statement that university alcohol policy helps decrease problem drinking among peers. According to the reviewed literature, the fact that the majority of surveyed students responded with disagreeing or strongly disagreeing that the current policy is effective in changing peer behavior may be problematic in the success of the alcohol policy.(DeJong et al. 2007). Powerful resistance becomes more apparent when opponents believe they will be speaking for a bulk of the students on campus (DeJong et al., 2007). Therefore, with the majority of students indicating alcohol policy does not help decrease drinking among peers; students may be under the false notion that a negative view toward alcohol policy is the norm. The data indicates that opposition to alcohol policy may be due to the perception that peers do not support the policy. Thus, DeJong et al. (2007) conclude that a survey should be sent to students in order to help students as well as administration to gain a better understanding of what policies would be supported. Such a survey could help illustrate to students that many of the policies are supported by their peers, which in turn may empower students to publically speak up regarding their

support for tougher policies. Since the majority of male and female students believe that alcohol policy does not reduce problem drinking in their peers, it may indicate that opposing voices on alcohol policies have significant influence on the student population at large.

A majority of students disagreed or strongly disagreed on whether university alcohol policy is an effective tool in preventing problem drinking on campus. The best barometer to gauge a policy's success may be to ask those directly affected by regulations, the students. Based on the current data, students do not consider current policy effective; this may be due to a policy that is less comprehensive, in that it doesn't take all members of the campus community, into account. Drinking behavior and offenses at off campus establishments may not be considered punishable offenses. In addition, effective prevention programs may not be part of the policy, and thus students may view policy as ineffective. Previous studies also suggest that certain factors help with creating partnerships: college staff working as community organizers, and high level administrators who champion community partnerships (Zakocs et al., 2008). The current alcohol policy may be lacking in these areas.

The perception that ineffective alcohol policy is a result of administrators' lack of understanding or experience with the issue may be reasonable considering the fact that only half of administrators who are assigned to alcohol and drug abuse issues report regular monitoring of campus drinking problems (Rhodes et al., 2005). Yet, it is essential for the administrators in charge of alcohol-related issues to be personally familiar with drinking faced by the campus community (Rhodes et al., 2005). Through student and community involvement in the policy-making process, administrators may be better able to understand the issues surrounding problem drinking. Furthermore, better understanding and awareness of problem

drinking may lead to a more effective policy.

A majority of students disagreed or strongly disagreed that harsher enforcement of the alcohol policy has an effect on their drinking behaviors. Rhodes et al.'s study (2005) asserts that the range of perception the administration displays clashes with the depth of the campus drinking policy. The study suggests many administrators may not perceive problem drinking to be as serious a problem as it may actually be on their campuses. Thus, the current data may indicate a lack of understanding of extent of the problem. Students may deem punishment for alcohol-related infractions unlikely. Moreover, students may dismiss the seriousness of problem drinking, and therefore, perceive strict policy enforcements as an overreaction by the administration.

A majority of male and female students agreed or strongly agreed that they are familiar with university alcohol policy. Familiarity with the campus' alcohol policy was an important variable because assessing whether or not students feel they understand the policy is a key component before students are able to take an active part in becoming stakeholders along with the administration and the community at large. Thus, since the majority of participants indicated their understanding of existing alcohol policies, unfamiliarity with campus policies is unlikely to play a role in participants' responses. At the same time, while a majority of students agreed or strongly agreed that they are aware of the policy, a majority also believed that alcohol policy has little effect on their behavior. Wagenaar et al.'s (2004) findings support the idea that changing the rules of students' social environment would affect students' behavior. However, current data indicates that both male and female students feel differently about this, with both male and female having responded that policy has little or no effect on their behavior

More males disagreed or strongly disagreed on whether drink specials and availability of alcohol affects their consumption, whereas more females agreed or strongly agreed with the same statement. Male and female differences in response may be explained by a complex combination of physical, social, economic, and legal issues influencing alcohol's appeal and availability (DeJong et al., 2007). For example, bars may specifically market drink specials to women in order to attract more female customers. As a result, the most helpful and resourceful way to decrease problem drinking on campus may be to change the environment through institutional, community, and public policy changes.

Qualitative Comments

Several themes were identified in the qualitative section of the survey. One theme is peer pressure because it was mentioned as a cause for students' problem drinking. Several participants also identified a lack of campus activities as a factor affecting their alcohol consumption. These two responses support Rhodes et al.'s (2008) findings that environmental characteristics tie into campus drinking culture. In addition, several of the survey responses could be themed as critical toward the enforcement of the alcohol policy; more than a few students stated that administration cannot control their drinking behaviors. One participant's response exemplifies this type of thinking: "We are grownups, the Chancellor cannot tell us not to drink. The more he tells us to stop the more we are going to do it." This and other responses suggest that drinking behavior may be seen as a way for college students to assert their independence as adults. In order for a policy to be successful there needs to be unilateral action with the campus community (Zakocs et al., 2008). Perhaps participants' responses indicate that students do not feel understood and acknowledged by the

administration and in turn do not support the policy.

Other open-ended responses criticized institutional policies and offered suggestions for change. One response stated, "College students are going to drink, penalties are going to have a low impact. Education about drinking and the risks is what can help avoid tragedies. However students should be a part of an education campaign other students are much more likely to take them seriously rather than an authority figure." The idea of strong education and student involvement is also supported by Zakocs et al.'s (2008) findings.

Limitations

The major limitation to this study is the small sample size and the non-random design. There were a large number of undecided responses, which may have been the result of using only a five-point Likert scale instead of a seven-point with more variation. Another limitation is the use of self-administered questionnaire because participants report their own perception of behaviors; clearly, at times, there is a noteworthy difference differences between what a person says is affecting his or her behavior and what actually does affect a person's behavior.

Implications for Practitioners

The data demonstrates that the environment strongly influences students' consumption of alcohol. Females report that drink specials and the availability of alcohol affect their consumption. Since there is a high likelihood of females being affected by outside factors such as gender-specific alcohol marketing, it may be beneficial for policy makers to form a partnership with outside forces (e.g., local tavern owners). The present study clearly suggests the need for a collaborative policy-making process, including all

individuals affected by alcohol policies. If students do not see themselves as stakeholders, they may be less likely to hold a positive attitude toward any policy; they might even take an oppositional stand. Moreover, while students do not agree with current alcohol policy, students still want to be involved in the policy-making process. If policy makers would partner with students as well as the community, and thereby including students in the rule-making process, student's attitudes toward policies could become more accepting. Similarly, if policy makers seek to make their alcohol policy more effective, they may want to actively engage students as stakeholders by offering them ways to express their opinions and experiences (e.g., listening sessions or open forums). As a result, policy makers may begin to see an increase in the effectiveness of university alcohol policy.

Implications for Future Research

There are some suggestions for future researchers; future research should include a random, large sample in order to be able to generalize the findings nationwide. It would also be useful to increase the variability on the scale, using a seven-point Likert scale instead of a five-point. Over 20% of participants responded undecided in regard to whether or not they would like to be more involved in the policy rule-making process on campus and whether students' feedback had been solicited regarding ideas on how to decrease problem drinking on campus. The high number of undecided responses may be a result of the limited scale range. On the other hand, the large amount of undecided responses could also be a result of participants misinterpreting questions. Over 20% of females responded undecided to two of the variables, which stated whether the university alcohol policy helps decrease problem drinking amongst peers and whether students' input on problem drinking is taken seriously.

Editing such statements for clarity and conciseness may result in participants' improved understanding of what they are being asked about in terms of input.

Conclusion

Confirming previous studies, the pilot study at hand clearly suggests the need for a collaborative alcohol policy-making process; a process that should include all individuals affected by these policies. If students do not feel they are stakeholders, they may be less likely to hold a positive attitude toward policies and take an oppositional stand. On university campuses across the nation, problem drinking continues to rob young people of their potential and puts communities at risk. With continued research, there will be greater student involvement and as a consequence more effective alcohol policy, which will likely lead to a reduction in problem drinking and alcohol-related deaths.

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A County Level Analysis of High School Dropout Rates Nationwide

Brandon Hallstrand

Undergraduate Student, Business Administration

Kunjan Upadhyay

Undergraduate Student, Business Administration

Abstract

Not long ago, the educational system in the United States was seen as an exemplary model throughout the world. In recent years, the United States is losing the competition in terms of educational attainment compared to other industrialized countries, and the situation calls for concerns. In the face of an increased integration of world economies and the associated fierce global workforce competition, it is important for the United States to remain as competitive as it was. To address the issue, this paper analyzes the socioeconomic factors that explain the dropout rates in the United States using county-level data for 1990 and 2000 from the U.S. Bureau of the Census. Our findings point to regional as well as racial disparities.

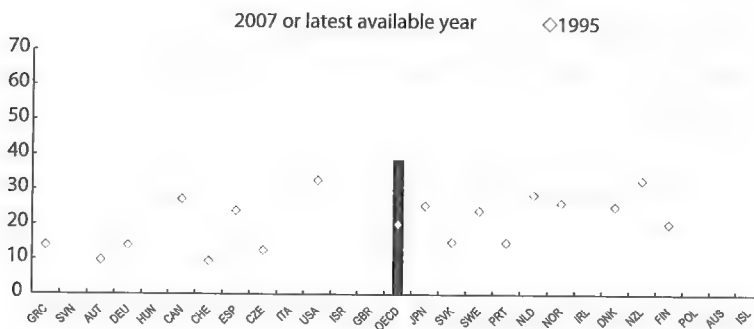
Keywords: counties, dropout rates, races.

In the past 20 years, education in the United States has seen many improvements, including the desegregation of public schools in the 1960s and increases in female graduation and education rates. However, this upward trend in national school attainment and graduation rates hides tremendous educational attainment disparities among U.S.

regions, genders, and races. According to Laird, DeBell, and Chapman (2007), the national dropout rate declined substantially from 14% in 1980 to 8% in 2008, while the gaps between racial groups have remained. Even in 2008, the dropout rates by race ranged from 4.4% to 18.3% (Laird, DeBell, & Chapman, 2007). With the male dropout rate in 1980 being 15.1% and the female dropout rate 13.1% and the 2008 rates of 8.5% and 7.5% respectively, it is evident that educational attainment has improved for both genders. However, one interesting fact between the 1980 and 2008 rates is that males continue to show a higher dropout rate compared to females.

At the international level, the general educational system of the United States is being challenged as well. According to the Organization for Economic Co-operation and Development (OECD) (2010), the United States is currently ranked 16th amongst the 26 listed nations, a change from fifteen years ago when the United States were ranked 1st.

Figure 1: Educational Attainment Rates within OECD Countries 2010



Source: Organization for Economic Cooperation and Development, 2010.

Prior studies investigated high school dropout rates and educational attainment in specific areas such as the central region of the United States or Chicago public schools (e.g.,

Randel, Moore, & Blair, 2008; Allensworth & Easton, 2001). We feel that these previous studies do not sufficiently address the high school dropout rates within the United States as a whole. This paper will contribute to the literature by analyzing the high school dropout rates across the United States using county-level data. We will use economic as well as social factors to explain the prevalent high school dropout rates in the United States. Specifically, we intend to investigate how local government expenditures on education and per capita personal income affect county-level high school dropout rates in the United States. At the same time, we look at the effect on high school dropout rates of the male to female ratio, different racial groups, and geographic location of a county. Everything else the same, the more money one spends on a good or a service, the higher the quality of the product or service one expects to receive. Thus, we expect that high school dropout rates should be lower in counties with higher local government expenditures on education. We also expect counties with higher share of per capita personal income to have lower dropout rates. We anticipate this because higher per capita income means lower poverty rates, and poverty is a motivating factor in dropping out of school. As far as the social factors are concerned, their effects on dropout rates could go either way or may have no effect because it is very difficult to predict human behavior.

Our analysis of dropout rates is as timely as a 2010 report by the OECD illustrating how the United States is facing huge challenges in terms of its educational system as compared to the rest of the listed economies. Moreover, in the face of the increasing and fierce international competitiveness of the labor force as a result of globalization, the topic related to education cannot be investigated enough. The aim of this paper is to explain the high school dropout rates using racial disparities across the United States at the county level.

Other control variables, as used by previous studies, are also included in our paper.

Methodological Framework

We use multiple regression models to quantify and analyze the effects that the economic, social, and geographic variables have on high school dropout rates using county-level data collected from the U.S. Census. Our methodological framework includes three models which attempt to explain the high dropout rates across the United States. The first two models are comprised of cross-sectional regressions of data for 1990 and 2000 and the third being a panel regression of the two cross-sectional data sets with the added variable of time.¹ We feel that having the three separate models helps add to the validity of the study and allows a controlled comparison of each regression. Shown below are our starting models; the only difference being that Model 2, the panel model, contains a year variable used as a dummy variable to account for any factors that could affect the high school dropout rates not included in Model 1. The year dummy variable is set to take the value of one for year 2000 and zero otherwise.

Model 1

Cross-sectional Model for 1990 and 2000

$$\text{Dropout rate} = a_0 + a_1PPI + a_2LgSpnd + a_3ChgSpnd + a_4M/F +$$

$$a_5White + a_6Asian + a_7Black + a_8AM\ Ind + a_9Other + a_{10}Midwest +$$

$$a_{11}South + a_{12}West + \epsilon_i$$

Note: (PPI)= Per capita Personal Income, (LgSpnd)= Local Government Expenditures for Education per Child, (ChgSpnd)= Change in Local Government Expenditure for Education per Child, (M/F)= Ratio of Male population to Female Population. Whites, Asians Blacks and (AM Ind)= American Indians are the major races we will be following. Whereas other category combines race such as Hispanics and others; this is due to the difficulties in separation on Census data. Finally, ϵ_i is a random error that is assumed to have mean of zero and variance σ^2 . That is to say that there is an unknown variance which is relatively unimportant due to the assumed mean of zero.

1. Cross-sectional data sets are data sets which consist of variables in one point in time whereas panel data sets allow for the combination of multiple cross-sectional data sets from different points in time.

Model 2 **Panel Data Model**

$$\begin{aligned}\text{Dropout rate} = & a_0 + a_1PPI + a_2LgSpnd + a_3ChgSpnd + a_4M/F + a_5White + \\ & a_6Asian + a_7Black + a_8AM\ Ind + a_9Other + a_{10}Midwest + a_{11}South + \\ & a_{12}West + a_{13}Y2000 + \epsilon_{it}\end{aligned}$$

All the variables have the same meaning as defined in the above cross-sectional model. And Y2000 stands for year 2000 dummy variable. It equals 1 if the year is 2000, and zero if 1990. The introduction of the year dummy variable allows us to track for changes in the variables that have occurred between 1990 and 2000.

Each equation of the preceding models was assessed using the best subset function of the statistical software package Minitab 16. The best subsets output was then analyzed primarily on the basis of the Mallows' Cp value, which helps to choose a model that is highly explanatory with a minimal number of variables. The best model is then chosen and estimated using the Ordinary Least Squares (OLS) regression method². The following are the end models we have chosen (our preferred models) based on the Mallows' Cp value test.

Model 3 **Cross-sectional for 1990 and 2000**

$$\begin{aligned}\text{Dropout rate} = & a_0 + a_1PPI + a_2LgSpnd + a_3M/F + a_4White + a_5Asian + \\ & a_6Black + a_7AM\ Ind + a_8Other + a_9Midwest + a_{10}South + \epsilon_{it}\end{aligned}$$

Model 4 **Panel**

Dropout rate

$$\begin{aligned}= & a_0 + a_1PPI + a_2LgSpnd + a_3M/F + a_4White + a_5Asian + a_6Black \\ & + a_7AM\ Ind + a_8Other + a_9Midwest + a_{10}South + a_{11}Y2000 + \epsilon_{it}\end{aligned}$$

2. Interested reader can refer to any introductory statistics textbook for a detailed discussion about OLS regression method.

Data and Descriptive Statistics

Dependent Variable

In economics, the dependent variable is the variable that the model seeks to explain using a set of other variables called explanatory variables.³ Our dependent variable is the dropout rate calculated using U.S. Census Bureau data. This rate was calculated by finding the percentage of persons ages 16 to 19 who are not in school and have not graduated from high school. This is a status dropout rate, meaning that it is a measure of the percentage of a given age group that has already dropped out of high school. As such, this rate is an understatement of the true dropout rate⁴, but it gives a good understanding of the characteristics of the dropout population (Laird, DeBell, & Chapman, 2007).

Independent Variables

The independent variables, also called the right hand-side variables or the explanatory variables, are the variables used to explain changes in the dependent variables. As far as modeling an economic behavior is concerned, researchers must choose between a simple regression model and a multiple regression model. A simple regression model is a model with one dependent variable and one explanatory variable. A multiple regression model has one dependent variable and two or more right hand-side variables. For the purpose of this paper, we use a multiple regression model. As mentioned above, our explanatory variables include a set of social, economic, and geographic factors⁵.

The social independent variables include the ratio of male to female, the percentage of total population, that is, White, Black, Asian, Hispanic, and Other. It is evident in

3. We discuss the meaning of the explanatory variables in the section that follows.

4. See Grunewald and Chung (2011) for the discussion about how the high school dropout rate as it is currently measured raises some questions.

5. In this paper, we interchangeably use the terms "variable" and "factor."

reading through papers on the topic related to education that race and gender are correlated to high school dropout rates in the United States; more specifically, we are looking to build upon the work of Allensworth and Easton (2001). In their paper, the authors show graphs of the dropout rates of cohorts of students by either race, gender, or both, resulting in quite interesting findings. We are interested in the profound differences in the performances of the races, especially in the fact that Asians are shown to be far apart and below in dropout rates relative to other races (Allensworth & Easton, 2001). Therefore, we would like to expand upon Allensworth and Easton's (2001) analysis, which was limited to Chicago public school data, by using a country-wide data set with similar race categories. The race categories which we incorporated are all "population of one race" categories for consistency. That is to say that each individual is considered to be of one race and one race only within the data set we used. The racial categories are Asians and Pacific Islanders, Whites, Blacks, Native Americans, and Other. This collection of races was chosen by looking at the work set forth in multiple papers on the subject (e.g., Allensworth & Easton, 2001; Randall, 1997). It is also important to note that the Hispanic race category is included in the Other category due to the difficulties of differentiating between the two (i.e., Hispanic and Other) in the Census data. It seems that a substantial portion of the Other category is made up of Hispanics not reported elsewhere.

The economic variables included in this paper are the Per Capita Personal Income (PPI) and the Local Government Expenditures for Education per Child (LgSpnd). We feel that these variables are likely to influence the educational outcomes of high school students, and as Mayer (2001) states, "Much less research has been done on the consequences of inequality than its cause" (p. 1). It is important to note, however, that the

Local Government Direct Expenditures for Education variable has been used as both a three-year lagged variable (LgSpnd) and a percent-change variable (ChgSpnd). The time lag was necessary due to the limited number of years for which there was available data. It is furthermore important to note that in order to limit the influence of changes in expenditure during our period of study, these dollar-denominated variables have been adjusted for inflation using the Consumer Price Index (CPI) year average value for the respective year, with 1990 being the base year (U.S. Department of Labor, 2010).

To account for possible effects of geography in explaining the high school dropout rates, we included four regional variables using the regions defined by the U.S. Census Bureau. In effect, the U.S. Census Bureau divided the United States into four regions: Northeast, South, West, and Midwest. Those four regions are included in our models as dummy variables. For example, a county located in the Midwest takes a value of 1 for the variable⁶ Midwest, and a value of zero for the remaining three regions. Including all the four regions in our models would cause a multicollinearity⁷ problem when estimating the models. According to Gujrati (1988), "there are various ways to solve this problem, the simplest one is to assign dummy variables and use only $m-1$ variables if there are m levels or classes of the qualitative data" (p. 436). To address the multicollinearity issue, we dropped the Northeast region from our models.

A final variable we chose to incorporate is a time variable, represented as a dummy variable in our panel regression. To form the panel data models, we stocked our data by county for both 1990 and 2000. And then, we incorporate a time dummy variable which takes a value of one for the year 2000 and zero for the year 1990.

6. Please note that we are using the regions as variables in our study.

7. Multicollinearity means the existence of a linear relationship among some or all explanatory variables of a regression model (Gujrati, 1988).

The descriptive statistics for each of the variables may be found in the tables below. Table 1 shows the statistics for the all inclusive model; Table 2 shows the statistics for the 1990 model, and Table 3 shows the statistics for the 2000 model.

Table 1
1990 Descriptive Statistics

Variable	N	Mean	StDev	Minimum	Maximum
Drop	3040	11.058	5.402	0.602	51.064
PPI	3040	15326	3567	5479	50230
LgSpnd	3040	4.2647	1.4709	0	26.0506
ChgSpnd	3040	0.1161	0.7406	-1	39.5501
M/F	3040	96.456	7.415	81.055	211.806
White	3040	84.418	18.263	2.584	99.845
Asian	3040	0.7102	2.5387	0	62.9562
Black	3040	8.622	14.303	0	86.236
Am Ind	3040	1.722	7.153	0	94.668
Other	3040	4.527	11.148	0	97.216

Note. Data calculated from U.S. Census Bureau

Table 2
2000 Discriptive Statistics

Variable	N	Mean	StDev	Minimum	Maximum
Drop	3040	9.7201	5.129	0.3145	57.9785
PPI	3040	17554	4383	5685	65100
LgSpnd	3040	5.1474	2.2402	0	91.4449
ChgSpnd	3040	0.20347	0.25865	-1	4.3085
M/F	3040	98.591	8.807	74.1	205.4
White	3040	81.234	19.05	2	99.5
Asian	3040	0.8917	2.3884	0	54.9
Black	3040	8.804	14.472	0	86.5
Am Ind	3040	1.868	7.44	0	94.2
Other	3040	6.238	12.094	0.1	97.5

Note. Data calculated from U.S. Census Bureau

Table 3
Panel Discriptive Statistics

Variable	N	Mean	StDev	Minimum	Maximum
Drop	6080	10.389	5.309	0.314	57.979
PPI	6080	16440	4148	5479	65100
LgSpnd	6080	2.1324	2.3726	0	26.0506
ChgSpnd	6080	0.0581	0.5269	-1	39.5501
M/F	6080	97.523	8.21	74.1	211.806
White	6080	82.826	18.727	2	99.845
Asian	6080	0.801	2.4662	0	62.9562
Black	6080	8.713	14.387	0	86.5
Am Ind	6080	1.7952	7.2975	0	94.6677
Other	6080	5.383	11.661	0	97.5

Note. Data calculated from U.S. Census Bureau

It becomes apparent from Table 1, Table 2, or Table 3 that racial composition varies greatly from one county to another. As with the racial groups, there is also a large differentiation in high school dropout rates from one county to another across the United States, reinforcing our hypothesis that difference in high school dropout rates across the United States may be well explained using racial composition within a locality. This hypothesis is better tested using our estimation results presented in the section that follows.

Regression Analyses

Estimation Results using 1990 Data

Unfortunately, problems with the U.S. Census data caused us to drop the Hispanic data and instead use the racial category Other as a proxy. Even in doing so, the racial category Other was highly correlated with the rest of the racial variables used in the 1990 data set. Therefore, Other was dropped from the 1990 equation altogether. The estimated regression from Model 1, using 1990 data, is expressed as follows:

Equation 1: 1990 Regression

Dropout Rate

$$\begin{aligned} &= 15.307 - 0.00018014 PPI - 0.42925 LgSpnd + 0.0439 ChgSpnd \\ &+ 0.03249 M/F - 0.037947 White - 0.08853 Asian - 0.02859 Black \\ &+ 0.01446 Am Ind - 1.7027 Midwest + 2.6818 South + 0.3386 West \end{aligned}$$

Estimation Results using 2000 Data

The regression output of Model 1 using data from 2000 yields the following:

Equation 2

2000 Regression

Dropout Rate

$$\begin{aligned} &= -17.09 - 0.0001455 PPI - 0.15669 LgSpnd + 0.2318 ChgSpnd \\ &+ 0.047978 M/F + 0.2384 White + 0.223 Asian + 0.3014 Black \\ &+ 0.3014 Am Ind + 0.2856 Other - 0.5499 Midwest + 2.0526 South \\ &+ 0.3426 West \end{aligned}$$

All Inclusive Regression

As mentioned earlier in the paper, the main difference between Model 1 (using either data from 1990 or data from 2000) and Model 2, which we call the all inclusive model or the paned data model, is the inclusion of the time dummy variable. The estimated equation is as follows:

Equation 3

Panel Regression

Dropout Rate

$$\begin{aligned} &= -13.358 - 0.00016309 PPI - 0.44858 LgSpnd + 0.0456 ChgSpnd \\ &+ 0.040742 M/F + 0.23458 White + 0.2038 Asian + 0.27198 Black \\ &+ 0.30306 Am Ind + 0.27671 Other - 1.0407 Midwest + 2.4709 South \\ &+ 0.3963 West - 2.8263 Y2000 \end{aligned}$$

For ease of comparison, we have summarized the results from all the above three estimated models into a table which includes the estimated coefficients and their T-statistics, and the R-Squared for each model.

Table 4
Regression Analysis (using Models 1 and 2)

Predictor	1990	2000	1990-2000		1990	2000	1990-2000
Constant	15.307 (9.73)*	-17.09 (-1.68)***	-13.358 (-1.51)	R-Sq	22.90%	21.50%	22.60%
PPI	-0.00018014 (-6.31)*	-0.0001455 (-6.63)*	-0.00016309 (-9.4)*	R-Sq(Adj)	22.60%	21.20%	22.50%
LgSpnd	-0.42925 (-6.32)*	-0.15669 (-3.96)*	-0.44858 (-7.27)*				
ChgSpnd	0.0439 (0.38)	0.2318 (-0.69)	0.0456 (0.4)				
M/F	0.03249 (2.59)*	0.047978 (4.88)*	0.040742 (5.24)*				
White	-0.037947 (-4.58)*	0.2384 (2.32)**	0.23458 (2.66)*				
Asian	-0.08853 (-2.31)**	0.223 (1.64)***	0.2038 (1.99)**				
Black	-0.02859 (-2.85)*	0.3014 (2.98)*	0.27198 (3.1)*				
Am Ind	0.01446 (1)	0.3207 (3.03)*	0.30306 (3.37)*				
Other	N/A N/A	0.2856 (2.84)*	0.27671 (3.16)*				
Midwest	-1.7027 (-4.63)*	-0.5499 (-1.57)	-1.0407 (-4.09)*				
South	2.6818 (6.97)*	2.0526 (5.62)*	2.4709 (9.37)*				
West	0.3386 (0.8)	0.3426 (-0.84)	0.3963 (1.35)				
Y2000	N/A N/A	N/A N/A	-2.8263 (-9.01)*				

Note:

* : denotes the variable is statistically significant at 1%

** : denotes the variable is statistically significant at 5%

***: denotes the variable is statistically significant at 10%

We chose not to discuss the results from Table 4 because the models expressed in the form of equations 1, 2, and 3 are not our preferred models. We did not choose these models because of the relative weakness of the variables in the models. In the table, there are many variables which are not significant to the equation. The significance is to

some degree denoted by the asterisks in the table. Variables lacking asterisks are deemed to be insignificant at the ten percent level.

As mentioned earlier in the paper, the choice of our preferred models was done by running the subset test which allows us to improve upon our model. Thus, we move on to Model 3 and Model 4.

Our Preferred End Regression Equations

The following equations are the estimated Models 3 and 4, with equations 4 and 5 being the estimated Model 3 using the 1990 and the 2000 data respectively, and equation 6 being the estimated panel data Model 4

Equation 4 1990 End Equation

Dropout Rate

$$\begin{aligned} &= 15.5 - 0.00018 \text{ PPI} - 0.43247 \text{ LgSpnd} + 0.3425 \text{ M/F} \\ &- 0.3888 \text{ White} - 0.8688 \text{ Asian} - 0.0295 \text{ Black} + 0.01461 \text{ Am Ind} \\ &- 1.9139 \text{ Midwest} + 2.466 \text{ South} \end{aligned}$$

Equation 5 2000 End Equation

Dropout Rate

$$\begin{aligned} &= -15.86 - 0.0001472 \text{ PPI} - 0.16655 \text{ LgSpnd} + 0.048946 \frac{\text{M}}{\text{F}} \\ &+ 0.2284 \text{ White} + 0.2122 \text{ Asian} + 0.2919 \text{ Black} + 0.3123 \text{ Am Ind} \\ &+ 0.277 \text{ Other} - 0.7574 \text{ Midwest} + 1.8143 \text{ South} \end{aligned}$$

Equation 6 Panel End Equation

Dropout Rate

$$\begin{aligned} &= -12.234 - 0.0001663 \text{ PPI} - .45195 \text{ LgSpnd} + 0.4223 \frac{\text{M}}{\text{F}} \\ &+ 0.22502 \text{ White} + 0.1965 \text{ Asian} + 0.26239 \text{ Black} + 0.2947 \text{ Am Ind} \\ &+ 0.26883 \text{ Other} - 1.2861 \text{ Midwest} + 2.2185 \text{ South} - 2.8538 \text{ Y2000} \end{aligned}$$

See Table 5 for a summary of the values from Equations 4, 5 and 6.

Table 5
Regression Analysis Adjusted (using Models 3 and 4)

Predictor	1990	2000	1990-2000		1990	2000	1990-2000
Constant	15.5 (9.97)*	-15.86 (-1.57)	-12.234 (-1.39)	R-Sq	22.90%	21.50%	22.60%
PPI	-0.00018 (-6.46)*	-0.0001472 (-6.77)*	-0.00016627 (-9.68)*	R-	22.70%	21.20%	22.50%
LgSpnd	-0.43247 (-6.39)*	-0.16655 (-4.38)*	-0.45195 (-7.35)*	Sq(Adj)			
M/F	0.03425 (2.78)*	0.048946 (5.02)*	0.04223 (5.48)*				
White	-0.03888 (-4.74)*	0.2284 (2.24)**	0.22502 (2.56)*				
Asian	-0.08688 (-2.28)**	0.2122 (1.57)	0.1965 (1.92)**				
Black	-0.0295 (-2.96)*	0.2919 (2.91)*	0.26239 (3)*				
Am Ind	0.01461 (1.01)	0.3123 (2.97)*	0.2947 (3.28)*				
Other	N/A	0.277 (2.77)*	0.26833 (3.07)*				
Midwest	-1.9139 (-7.38)*	-0.7574 (-3.07)*	-1.2861 (-7.18)*				
South	2.466 (8.95)*	1.8143 (7.15)*	2.2185 (11.88)*				
Y2000	N/A	N/A	-2.8538 (-9.16)*				

Note:

* : denotes the variable is statistically significant at 1%

** : denotes the variable is statistically significant at 5%

***: denotes the variable is statistically significant at 10%

Relative to Models 1 and 2, Models 3 and 4 show great improvements in the significance of individual variables with no adjustment to the R-Squared terms. Most of the variables are significant at the one percentage level. This means that we can be much more confident of the impact each individual variable has on dropout rates.

There is consistency across the models with respect to several of our variables as far as their signs and magnitudes are concerned. PPI and LgSpnd per student are both negatively correlated with dropout rates. That means

counties with higher per capita personal income have seen a decline in the dropout rates of their high school students for the period between 1990 and 2000, all else equal. Also, the increases in the local government educational expenditures are correlated with lower dropout rates; although, the effects of educational expenditures on dropout rates seem to kick in with a time lag (three years in this study). Specifically, a 1% increase in *LgSpnd* is associated with a 0.45% reduction in high school dropout rates three years later. This negative association between high school dropout rates and *LgSpnd* appears in the 1990 and the 2000 data as well. These results suggest that economic factors play a role in explaining the high school dropout rates.

Also, there does seem to be a regional dynamic involved because the Midwest is consistently shown as having an inverse relationship with dropout rates, while the South has a positive relationship. In other words, someone living in the southern parts of the United States is more likely to drop out of high school than someone who lives in the Midwest. This result reinforces the relationship between per capita personal income and dropout rates. Indeed, previous studies have documented that the southern United States have a higher number of people living below the poverty level compared to the Midwest region.

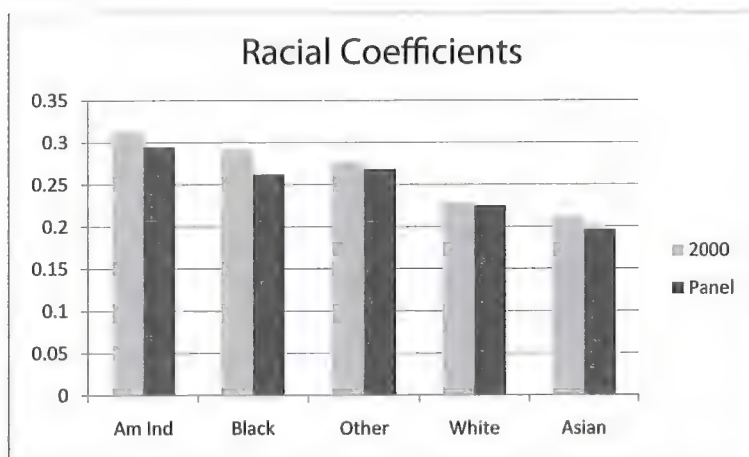
Another important finding is that the male to female coefficient consistently shows males have higher dropout rates compared to females, all else equal. The gender difference in high school dropout seems to widen over time. Namely, the estimated coefficient of *M/F* has increased from 0.034 in 1990 to 0.049 in 2000.

One startling result is in regard to racial categories. The sign of the coefficients on different race groups, with the exception of the Native Americans, has turned from negative in 1990 to positive in 2000. The results suggest that, all else

equal, in the 1990s and before, Native Americans were most likely to drop from high school compared to either Whites, Blacks, or Asians. However, between 1990 and 2000, race alone did not explain the likelihood of dropping out of high school. Nevertheless, Blacks and Native Americans have shown a greater tendency to drop out of high school. A graphical illustration of the coefficient estimates of the different race groups is shown in Figure 2 below.

Figure 2

Racial Coefficients by Model



Our results showing lower dropout rates attributed to Asian populations are in line with the findings in the Chicago public schools by Allensworth and Easton (2001).

Lastly, the time trend was found to be statistically significant and showed an inverse relationship with dropout rates. Specifically, dropout rates have decreased between 1990 and 2000, and there is reason to hope that the U.S. dropout rates will continue to decline, but this hope is contrary to other research, suggesting that dropout rates will soon begin trending upward (Laird, DeBell, & Chapman, 2007)

Conclusion

The findings of this paper have some policy implications. Based on our results, we can conclude Local Educational Spending is a variable that has a large and positive impact in decreasing dropout rates. Assuming causality between the variables, one dollar per school child at the 1990 price level is associated with a 0.16-0.45% likelihood of reducing high school dropout rates three years forward. The decrease in the dropout rates between 1990 and 2000 can also be partially attributed to an increase in the Per Capita Personal Income. In addition, we can assert that the findings of Allensworth and Easton (2001) in regard to the Chicago public schools also seem to hold true in the United States as a whole. We can also show that the Asian population is sustaining lower dropout rates compared to other races in the United States.

Lastly, our findings point to regional disparities in the United States that do not seem to be attributed to other variables, such as personal income alone. The indication is that something other than income, spending, or race may cause dropout rates in the South to be significantly higher than in the rest of the United States. At the same time, the Midwest seems to be experiencing the opposite phenomenon as its dropout rates are considerably lower.

Future Work

While our findings have successfully extended some of the more localized research we reviewed, further questions remain. Thus, there is an opportunity for future research into the nature of the regional disparity between the Midwest and the South. Income, race, and local spending do play a part in explaining the differences, but there are still unnamed variables accounting for the rest of the difference. These could perhaps be ideological differences, state and federal funding differences, or any number of other factors which we did not

explore. In the future, we would like to explore the reasons behind the lower dropout rates of Asian-Americans compared to the rest of the population.

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Incarceration and Fatherhood: Adapting to the Change

Michael A. Brown

Undergraduate Student, Human Development and Family Studies

Ashley E. Nelson

Undergraduate Student, Human Development and Family Studies

Abstract

Father involvement plays an important role in the development of a children, and for fathers who are incarcerated this presents challenges that seem insurmountable (Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008; Arditti, Smock & Parkman, 2005). The sites of this cross-sectional and nonrandom pilot study were at two Northwestern Wisconsin county jail facilities with 52 participants. Incarcerated fathers were surveyed on maintaining involvement with their children during incarceration. We hypothesized fathers who had a positive relationship with their children and the caretaker before incarceration would have higher levels of involvement during incarceration. Survey data were statistically analyzed using frequencies, mean-comparisons, correlations, and a Cronbach's Alpha reliability analysis. Variables that dealt with having a good relationship with the primary caregiver and involvement with the children through visitations and contact with children at least weekly showed there was a significant correlation. Implications for practitioners are that current correctional facility policies and correctional staff limit fathers' involvement in the lives of their children; facilities need to improve access to support father-child involvement.

Future research would benefit by having a large, randomized national sample and a more appropriate survey reading level, as well as qualitative interviews.

Keywords: incarceration, father involvement, inmates, jail programming

Father involvement plays an important role in the development of children, and for fathers who are incarcerated, this presents challenges that seem insurmountable (Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008; Arditti, Smock & Parkman, 2005). Recent increases in incarceration rates means even more children are disadvantaged by decreased father involvement (Day, Acock, Bahr, & Arditti, 2005). Because the term involvement can mean many things, we used a three-part definition found in literature: *Accessibility*—being available; *Engagement*—being involved through activities such as play; and *Responsibility*—decision making and financial support (Sarkadi et al., 2008). Many issues create factors that limit incarcerated fathers' ability to remain involved in their children's life during incarceration. Mothers often act as gatekeepers to their children, limiting the frequency of visitation or phone contact with fathers in order to shield children from their father's situation (Arditti et al., 2005). Public and institutional policies have also created barriers to father involvement. For some incarcerated fathers, the high costs of collect calls limit their ability to maintain contact during incarceration. In some prison systems, a fifteen-minute call costs as much as ten dollars (Hairston, 2001).

The legal system can also be a hindrance for fathers to stay involved. Courts may deny visitation during incarceration for a variety of reasons, including location of facility, type of

offense committed, and the father's relationship history with his children prior to incarceration (Maldonado, 2006). Present literature focused on larger state and federal correction facilities where location and severity of crimes committed are often a factor (Maldonado, 2006). While county facilities have their share of serious offenses, such as domestic abuse, they are often located in urban settings with easy access to those living in the surrounding community. This survey research investigated the attitudes of incarcerated fathers in two northwestern Wisconsin county jail facilities towards maintaining involvement with their children during incarceration.

Literature Review

A common theme in existing literature is that positive father involvement has benefits to the overall development of the children socially and emotionally. While many researchers focus on the attitudes of incarcerated fathers in their studies, very few researchers actually set out with the purpose of "giving a voice" to incarcerated fathers. Studies indicate policies and geographical location of correctional facilities may hinder positive father-child relationships during incarceration (Maldonado, 2006; Day et al, 2005). One study in particular, focused on the limitations imposed on fathers by institutional policies (Arditti et al, 2005).

Sarkadi et al. (2008) completed a systematic literature review to better understand an incarcerated father's involvement in his children's life. The study focused on the accessibility, engagement, and responsibility of fathers in their children's lives. A father's involvement in a child's life can lead to positive outcomes. For example, children from low income families whose fathers are engaged in their children's lives have less of a chance of high-risk behavior during their teen years. This article shows how significant it is for incarcerated fathers to be involved in their children's life (Sarkadi et al 2008).

Maldonado (2006) investigated reasons that hinder the father-child relationship during incarceration and the benefits to society for creating laws and policies which can foster increased involvement during incarceration. One key idea to Maldonado et al (2006) is that incarceration gives policy makers a strong platform for changing attitudes of fathers who are incarcerated over people who are not incarcerated. This conclusion supports the assumption in which father involvement can be facilitated while fathers are incarcerated.

In their pilot study, Day et al. (2005) primarily dealt with incarcerated fathers who were soon to be released and reunited with their families. Day et al.'s research introduces problems that fathers face during incarceration with regards to father involvement. Some of the problems mentioned by Day et al. are the costs and availability of phone calls, the location of the facility, and mothers behaviors (e.g., acting as a gateway to the children).

Arditti et al. (2005) conducted interviews with incarcerated fathers regarding their understanding of being a father and their involvement in their children's lives. The study focused on the relationship between the father and children, the involvement of the father, and the relationship with the mother. While being incarcerated, the father often had feelings of regret and helplessness when it came to being a father. In addition, fathers wanted to rebuild relationships with their children after being released. The involvement of the fathers with their children was limited because of existing jail policies. Since the fathers had little contact with family members, they felt as though they were unable to help the family and to fulfill some of their fatherly functions. The relationship between the incarcerated father and the children's mother became a challenge for the father. The father sometimes had to dependent on the children's mother to be able to have a relationship with their children.

Hairston (2001) breaks down the idea of what a "good father" is and identifies components that go into being a "good father." In the study, Hairston suggests that even though incarcerated fathers may not be able to give financial support during incarceration, they may still be able to fulfill other important roles. Although nurturing roles, such as emotional support or children guidance, can pose unique challenges because of limited contact due to incarceration, they may still be accomplished to a certain degree. Most importantly, Hairston argues institutional policies may be a significant barrier to whether or not incarcerated fathers have involvement of any kind.

Current literature demonstrated the importance of father involvement in the lives of their children (Sarkadi et al 2008; Maldonado 2006; Hairston 2001) and factors that hinder fathers' involvement in their children's lives during incarceration (Arditti et al 2005; Day et al 2005; Hairston 2001). However, all of these studies deal with larger state prisons where incarceration is typically longer than a year. Neither do these researchers consider short-term incarceration at smaller facilities, nor do they assess inmates' attitudes towards being involved in their children's lives. The present study focused on fathers who were incarcerated short term, less than a year, in county jails where distance to the facility and accessibility will be less of a factor.

Theoretical Framework

This study used Ecological Theory as the theoretical framework, which states that environmental forces impact families. This theory assumes the levels in an ecosystem interact in different ways depending on their relation to each subsystem. For example, the father is normally involved with his children's microsystem and has direct contact. When a father is incarcerated, he is now placed in the exosystem and has little or no influence on his children's life. Central to this

theory is the idea in which when changes occur at any point in the ecosystem, the subsystems survive through adaptation (White & Klein, 2002).

As applied to our study, this theory supports the idea that adaptation in the family system is needed to maintain paternal involvement during incarceration. This theory also predicts when the father is incarcerated, the family needs to adapt to the environment to maintain paternal involvement. It also assumes the new environment of incarceration needs to adapt as well so that the family system can stay intact as a subsystem. Ecological Theory predicts successful adaptation for the father-child relationship depends not only on the adaptation of the micro system (family) but also on the exosystem (jail facility).

Purpose Statement

The purpose of our study was threefold. The first was to investigate the attitudes of fathers towards involvement with their children during incarceration and what they feel would help improve their ability to maintain involvement while in jail. The second reason was to develop a reliable survey instrument to measure the involvement. The third purpose was to provide results that would allow county level jail facilities to foster father during incarceration. Additionally, the study hoped to pinpoint specific types of programs (e.g., fathering programs, relationship and children development classes) may be beneficial for smaller county jails to encourage father involvement.

The research question of this study was "What were the attitudes of incarcerated fathers towards maintaining involvement with their children while incarcerated in a county jail?" We predicted fathers, who had higher levels of involvement with their children and a positive relationship with the primary caregiver before incarceration, would have higher levels of involvement during incarceration.

Method

Participants

The two sites of this study were at two Northwestern Wisconsin county jail facilities. The participants were 55 incarcerated fathers who were either on work release or in secure lock up.

Table 1

Participants N=57

Age	18-25	26-35	36-45	46-55	56+		
	16	28	7	6	0		
Number of Children	1-2	3-4	5+				
	38	11	8				
Children under 18	Yes	No					
	57	0					
Relationship Status	MLP	MNLP	SEP	DIV	ULP	UNLP	PRI
	8	3	4	5	15	21	1

Note: (MLP) = Married living with Primary Caregiver; (MNLP) = Married Not Living with Primary Caregiver; (SEP) = Legally Separated; (DIV) = Divorced; (ULP) = Unmarried Living with Primary Caregiver; (UNLP) = Unmarried Not Living with Primary Caregiver; (PRI) = Primary Caregiver

Research Design

The purpose of this research was to be able to simplify to a population that some inferences could be made about characteristics, attitudes, or behaviors of this population of incarcerated fathers in a county jail facility (Babbie, 1990). The survey design type is best described as a cross-sectional study design because it was used to capture the attitudes of incarcerated fathers at one point in time. The form of data collection used for this research was self-administered questionnaires. The rationale for using this method was that it was the most efficient method to gather the data directly in a county jail facility due convenience, low cost, and the quick return of data. The population surveyed is incarcerated

males in two Northwestern Wisconsin county jail facilities; the sample consists of inmates who are fathers. The study used a non-random probability design because the sampling took place in the jail setting where all incarcerated fathers were included. The study used purposive sampling because its purpose was to gather data on attitudes of incarcerated fathers in county jail facilities. Because of the inaccessibility of the sample used, this study also used the snowball sampling method for data collection. Snowball sampling is a method in which the surveys were given to jail coordinators, and then jail coordinators gave the surveys to inmates who were fathers. We used an inside contact in order to access the incarcerated fathers used for the sample. The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

A survey was designed to address the attitudes of incarcerated fathers towards maintaining involvement with their children.

The survey consisted of six demographic questions relating to age, number and age of children, relationship with the mother of child/children, and the involvement with the children before incarceration. Participants were given twelve closed-ended statements based on a 5-point Likert scale, measuring the intensity of the respondents' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). Participants were also given three open-ended questions based on existing literature and theories regarding attitudes of incarcerated fathers maintaining involvement with their children.

The survey instrument had both face validity and content validity. Face validity refers to the instrument questions having a logical connection to the concept and research question. Content validity refers to the instrument statements' coverage of

the full range of concepts under the larger topic. The questions addressed had a broad range of issues regarding incarcerated fathers' involvement with their children. To increase validity, the survey was piloted to a schoolteacher and a businessman who were both fathers. The received feedback suggested the stated relationship demographics were confusing, so changes were made to clarify each statement. This was done by adding separate categories for married and unmarried, with choices for living with primary caregiver and not living with primary caregiver.

Procedure

Surveys were dropped off at each county jail and instructions for administering the survey was given to the program directors with regards to confidentiality, risks of participating, the statement of implied consent, and pressure from program directors or correctional officers while participating. Program directors at each facility explained the purpose of the study, risks of participating, and the statement of implied consent to potential participants; participants had twenty-four hours to complete the survey in private.

Data Analysis Plan

The data from the surveys was reviewed and checked for missing data and then completed surveys were coded using acronyms for each variable. The survey had seven demographic variables: *Gender (GEN)*; *Age (AGE)*; *Number of children (NOC)*; *I currently have children under the age of 18 (CCU)*; *Please indicate number of children in each age range below (NCR)*; *Relationship status with mother of your child/children prior to incarceration (RSM)*; *Involvement with children prior to incarceration (IPI)*. Each statement measured a variable and was given an acronym name: *The jail supports parents having contact with their children*

(SPC); *The correctional staff supports visitation with children (SSV); Rules of the facility limit my involvement in my children's life (FLI); My children's primary caregiver limits my ability to be involved with my children while incarcerated (PLA); My children's primary caregiver does his/her best to assist me in staying involved with my children while incarcerated (PAI); I have a good relationship with my children's primary caregiver in the best interest of the children (GRP); My involvement with my children is mostly through phone calls (ICP); My involvement with my children is mostly through visitations (ICV); Having physical contact with my children during incarceration would improve my ability to stay involved with my children (PCI); I am satisfied with the amount of visitation time with my children while in jail (SAV); I am able to be a positive influence in my children's life while incarcerated (APC); I am able to have contact with my children at least weekly while incarcerated (CCW).*

The computer program Statistical Package for the Social Sciences 18 (SPSS) was used to analyze the collected data. The individual was used as the level of analysis. Since the study did not compare groups, data analysis included only frequencies, mean-comparisons, and correlations. A Cronbach's Alpha reliability analysis was also conducted.

Results

Twelve variables were subjected to frequency distribution analysis. Results indicated missing data was found. From the original sample two surveys were discarded. One survey was discarded because the respondent indicated he was unfamiliar with facility policies due to being incarcerated less than a week. The second survey was eliminated due to the respondent indicating he was the primary caregiver

and failed to answer any questions concerning the primary caregiver. The final sample size was N=55. For the variable PCI, a large majority, 92.8%, of the respondents strongly agreed and/or agreed by having physical contact with their children during incarceration would improve their involvement. For the variable FLI and GRP, respondents also agreed and/or strongly agreed the rules of the facilities limit the involvement with their children and they have a good relationship with the primary caregiver. A large number of respondents indicated they agreed or strongly agreed with having weekly children contact.

For the variables PLA and PAI, respondents were mixed whether the primary care giver limits their ability to be involved with their children or the primary caregiver aids their involvement while incarcerated. For the variables ICP, respondents were mixed that contact with their children was mostly through phone calls. Respondents were also mixed for the variable ICV, indicating contact with their children was mostly through visitations.

For the variable SAV, a strong majority, 92.8%, of the respondents strongly disagreed and/or disagreed with being satisfied with the amount of visitation they had with their children. For the variables SPC and SSV, the majority of respondents disagreed and/or strongly disagreed that the jail supports involvement or the staff supports visitation with their children. With both of these variables, there was a high percentage of respondents indicating they were undecided about the jail or staff supporting their involvement or visitation. For the variable CCW, the majority, 54.5%, of respondents disagreed and/or strongly disagreed with having contact with their children on a weekly basis. For the variable APC, the majority, 58.2%, of the respondents disagreed and/or strongly disagreed with their ability to be a positive influence in their children's life. However, 20% of APC responses were undecided.

Table 2Frequency Distribution
Variable

	SD	D	U	A	SA	Total
SPC	45.5%	14.5%	27.3%	7.3%	5.5%	100.0%
SSV	27.3%	29.1%	20.0%	14.5%	9.1%	100.0%
FLI	9.1%	5.5%	10.9%	14.5%	60.0%	100.0%
PLA	32.7%	9.1%	9.1%	10.9%	38.2%	100.0%
PAI	41.8%	1.8%	7.3%	9.1%	40.0%	100.0%
GRP	16.4%	5.5%	20.0%	16.4%	41.8%	100.0%
ICP	29.1%	10.9%	16.4%	27.3%	16.4%	100.0%
ICV	52.7%	12.7%	5.5%	12.7%	16.4%	100.0%
PCI	1.8%	0.0%	5.5%	5.5%	87.3%	100.0%
SAV	87.3%	5.5%	5.5%	0.0%	1.8%	100.0%
APC	49.1%	9.1%	20.0%	10.9%	10.9%	100.0%
CCW	54.5%	10.9%	10.9%	21.8%	1.8%	100.0%

Note. (SPC) = The jail supports parents having contact with their children; (SSV) = The correctional staff supports visitation with children; (FLI) = Rules of the facility limit my involvement in my child's life; (PLA) = My child's primary caregiver limits my ability to be involved with my child while incarcerated; (PAI) = My primary caregiver does his/her best to assist me in staying involved with my child while incarcerated; (GRP) = I have a good relationship with my child's primary caregiver in the best interest of the child; (ICP) = My involvement with my child is mostly through phone calls; (ICV) = My involvement with my child is mostly through visitations; (PCI) = Having physical contact with my child during incarceration would improve my ability to stay involved with my child; (SAV) = I am satisfied with the amount of visitation time with my child while in jail; (APC) = I am able to be a positive influence on my child's life while incarcerated; (CCW) = I am able to have contact with my child at least weekly while incarcerated.

Table 3
Compare Means

	SPC	SSV	FLI	PLA	PAI	GRP	ICP	ICV	PCI	SAV	APC	CCW
Mean:	2.13	2.49	4.11	3.13	3.04	3.62	2.91	2.27	4.76	1.24	2.25	2.05
SD:	1.23	1.23	1.33	1.75	1.86	1.48	1.49	1.59	0.72	0.72	1.44	1.31
Range:	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Note. (SPC) = The jail supports parents having contact with their children; (SSV) = The correctional staff supports visitation with children; (FLI) = Rules of the facility limit my involvement in my child's life; (PLA) = My child's primary caregiver limits my ability to be involved with my child while incarcerated; (PAI) = My primary caregiver does his/her best to assist me in staying involved with my child while incarcerated; (GRP) = I have a good relationship with my child's primary caregiver in the best interest of the child; (ICP) = My involvement with my child is mostly through phone calls; (ICV) = My involvement with my child is mostly through visitations; (PCI) = Having physical contact with my child during incarceration would improve my ability to stay involved with my child; (SAV) = I am satisfied with the amount of visitation time with my child while in jail; (APC) = I am able to be a positive influence on my child's life while incarcerated; (CCW) = I am able to have contact with my child at least weekly while incarcerated.

Correlations were run on each pair of the 12 variables (SPC, SSV, FLI, PLA, PAI, GRP, ICP, ICV, PCI, SAV, APC, and CCW). There appears to be a large significant relationship between GRP and PAI. GRP, ICV, PAI, and CCW had a medium significant relationship between each pair. A small significance was also found between the pairs APC, CCW, and SAV.

Table 4

Variable	PAI	ICV	APC	CCW
PAI		.354**		.403*
GRP	.765**	.350**		.477**
ICV				.348**
SAV			.298*	.281*

Note. (PAI) = My primary caregiver does his/her best to assist me in staying involved with my child while incarcerated; (GRP) = I have a good relationship with my child's primary caregiver in the best interest of the child; (ICV) = My involvement with my child is mostly through visitations; (SAV) = I am satisfied with the amount of visitation time with my child while in jail; (APC) = I am able to be a positive influence on my child's life while incarcerated; (CCW) = I am able to have contact with my child at least weekly while incarcerated.

~N=55

**Correlation is significant at the $p < 0.01$ (two-tailed)

*Correlation is significant at the $p < 0.05$ (two-tailed)

A reliability analysis was run to indicate if the 12 variables (SPC, SSV, FLI, PLA, PAI, GRP, ICP, ICV, PCI, SAV, APC, & CCW) were a reliable index to measure the major concept: attitudes of incarcerated fathers towards maintaining involvement with their children. Cronbach's Alpha is a measure of reliability and in this analysis was -.089. This value indicates that the survey questions were an unreliable measure of the major concept. Reliability of the survey questions would increase to .394 if the variable PLA

would be removed; the implications of removing PLA are discussed in the following section.

Discussion

Incarcerated fathers having higher levels of involvement with their children and a positive relationship with the primary caregiver before incarceration will help the father to have higher levels of involvement during incarceration then if there was little involvement and the relationship with the primary caregiver was negative before incarceration was supported by the data. A significant correlation was found between having a positive relationship with the caregiver, primary caregiver aiding involvement, and involvement with children mostly through visitations.

Statistically significant correlations were found ($p < 0.01$ level) between several variables. Variables that dealt with having a good relationship with the primary caregiver and involvement with the children through visitations and contact with children at least weekly showed a significant correlation. This correlation is supported by the Ecological Theory that the family (ecosystem) will adapt to changes to maintain itself (White & Klein, 2002). A significant correlation (.765) between having a good relationship with the primary caregiver and the primary caregiver aiding involvement with the children support what is found in the literature concerning primary caregivers acting as gatekeepers. Correlations show by having a good relationship with the primary caregiver, which in most cases is the mother, improves the father's ability to stay involved during his incarceration. Current findings support the idea that the primary caregiver often acts as a gatekeeper and decides whether or not the father will be allowed visitation with his children (Arditti et al., 2005; Day et al., 2005). This finding suggests the quality of the relationship to the primary caregiver influences decisions

made by the primary caregiver relating to visitation; thus, the better the relationship with the primary caregiver, the greater the frequency of visitations. Variables dealing with jail facility and policies show statistically significant correlation between the incarcerated father's satisfaction with amount of visitation, contact with children at least weekly, and his ability to be a positive influence on his children's life. Existing literature suggests that fathers often feel they are unable to be a positive influence in their children's life when they have low or limited involvement during incarceration (Arditt et al., 2005; Hairston, 2001).

Respondents reported they strongly disagreed or disagreed that the jail supports contact with their children. In fact, policies in place at many facilities do not support incarcerated fathers being involved with their children (Maldonado, 2006; Day et al., 2005; Arditti et al., 2005). Respondents reported having a short amount of visitation time (20 minutes) with no physical contact. For the variable SSV, the majority of respondents disagreed or strongly disagreed with the survey question. These results are also supported by literature which states that jail policies and the attitudes of staff are often stated barriers to incarcerated fathers' involvement with their children (Maldonado, 2006; Day et al., 2005; Arditti et al., 2005). This question also returned a higher percentage (20%) of undecided responses. We hypothesize this may be due to the literacy of the inmates and the complicated language (such as incarcerated) used for the survey questions or participants feeling uncomfortable answering questions negatively. The latter may be caused by the differences in power between inmates, staff members, or the institution at large. Variables dealing with the jail or staff returned higher percentages of undecided responses than other variables. This may lead one to wonder if the perception of fear of unfair treatment from the correctional staff may

have played a part in their responses to these questions regardless of the steps taken to keep the participants identity from being discovered by staff members.

Three quarters of respondents agreed or strongly agreed that the facility limited their involvement with their children. The responses suggest that institutional policies may indeed limit father's ability to stay involved (Maldonado, 2006; Day et al., 2005; Arditti et al., 2005). These limiting facility policies were consistent with results previously discussed, although they lack the high percentage of undecided responses, suggesting that respondents had difficulties understanding the previous questions.

In the survey there were three statements that dealt with primary caregivers; responses were across the scale. The statement "my children's primary caregiver limits my ability to be involved with my children while incarcerated" was split with responses clustering both ends of the scale. Responses to "My children's primary caregiver does his/her best to assist me in staying involved with my children while incarcerated" were also split with having the majority being strongly disagree and strongly agree. Findings of our literature supports having a good relationship with the primary caregiver improved the amount of involvement (Arditti et al., 2005). The results in regard to the primary caregivers varied; this may be because it is specific to each incarcerated father. Each father's relationship with his children's primary caregiver can be positive or negative. In the qualitative section of our study, fathers commented on the mothers of their children not bringing their children to see them and they were not in control of it. The findings are in line with Arditti et al.'s (2005) assessment that mothers often act as gatekeepers by limiting the amount of visitation and accessibility of the children to the father. The last statement on the survey referring to the primary caregiver,

"I have a good relationship with my primary caregiver in the best interest of the children," had the highest responses being strongly agree or agree. The results reflect both father and primary caregiver as wanting what is in the best interest of the children.

Responses to incarcerated fathers having the main source of involvement be through telephone calls varied from strongly agree to strongly disagree. Based on previous research, most inmates would have disagreed due to the high costs of phone calls (Day et al., 2005; Arditti et al., 2005). Qualitative comments indicate that inmates on work release are able to have phone contact while they are on the outside, a fact that may account for the differences of the study at hand's findings and previous research; Day et al.'s study, for example, did not deal with facilities that offered work release programs.

The results for involvement being mostly through visitation had a majority of strongly disagreed or disagreed. There was also a significant amount of inmates that did respond as agree or strongly agree. Responses of agree or strongly agree for both of these variables are not supported by current literature and may be reflective of the differences the work release program has on the attitudes of incarcerated fathers. Incarcerated fathers who participated in the work release program may have more opportunity to visit with their children while they are on release. This would account for the high frequency of those responding agree or strongly agree. Incarcerated fathers who are on work release are able to find ways to adapt to the changes in their family life, increasing their involvement during incarceration. In fact, Ecological Theory suggests there are levels, or subsystems, that act on each other, which can depend on their relation to each level or subsystem. Ecological Theory also assumes that subsystems will adapt to maintain their existence when changes occur (White & Klein, 2002).

A high percentage of inmates agreed or strongly agreed having physical contact would improve their involvement with their children while incarcerated. Physical contact can be defined to the inmates by being able to hug, play with their children, and the father being able to have physical touch. Respondents reported that visitation with their children occurs through a glass window with no physical contact. Many respondents felt this punishes the children for the crimes their fathers committed. Physical contact may also reduce fathers' feelings of helplessness, emotions often experienced by incarcerated fathers (Arditti et al., 2005).

The majority of the respondents strongly disagreed with the statement that incarcerated fathers are satisfied with the amount of visitation time they are allotted in jail. Fathers' dissatisfaction is also reflected in qualitative comments in which respondents indicated that the visitation time was not long enough. The statement, "I am able to have contact with my children at least weekly," also relates to the statement with satisfaction of visitation time. The majority of respondents strongly disagreed with both statements relating to the amount of time during visitations and having weekly contact with their children.

The results for the statement "I am able to be a positive influence on my children's life while incarcerated" had majority of the responses being strongly disagreeing or disagreeing. Analysis of qualitative questions shows an emerging theme of fathers wishing to express to the correctional staff that they are not bad fathers. The fathers state they do not want to be bad father and also would like to have the opportunity to be a positive influence in their children's life. This is also supported in qualitative responses; fathers commented they would like to have classes to aid them in becoming a better father.

Qualitative comments revealed recurring themes which are shared by many of the respondents. A very common response for the first qualitative question, "What would help you to improve your relationship with your children while incarcerated?", was having phone calls be less expensive and longer. In addition, other themes such as wanting longer visits and a child-friendly, larger visitation area also emerged. As discussed in Day et al. (2005), a significant problem for inmates is the cost of phone calls, which can be as much as ten dollars for fifteen minutes of talk time. Similarly, Arditti et al. (2005) states that jail policies (e.g. visitation length, phone call expenses, and having restrictions on them) limit the ability of involvement the father can have.

The second qualitative question, "What do you feel would increase your ability to stay involved with your children during incarceration?," had many of the same answers as the first, but fathers also indicated that having a more positive relationship with the primary caregiver would be beneficial. Day et al. (2005) discovered that primary caregivers often act as a gateway to their children. Without a positive relationship the incarcerated father would be unable to see their children. One father stated, "A lot of mothers will use the children as a pawn to hurt the father is the worst way." This comment reinforces Arditti et al.'s (2005) findings, suggesting that fathers have to depend on the primary caregiver to see their children. The response to the last qualitative question, "What would you want the program director and the correctional staff to know or understand from your perspective as a father?," were similar as well because many respondents answered that even though they are incarcerated, their children still mean a lot to them.

Limitations

Major limitations for this study are the small sample size and the number of undecided responses. Undecided responses

may be the result of misunderstandings to statements due to the complicated language of the survey. Reading levels also limited responses which may have been helped by using qualitative interviews. In the qualitative responses some incarcerated fathers needed tutors while they took the survey because they were unable to understand the survey. Respondents may also have feared unfair treatment as many of the questions returned undecided response dealt with the facility or staff. Using a 7-10 point Likert scale could have helped gather data by increasing the variability of responses.

Implications of Practitioners

Sarkadi et al (2008) supports the need of encouraging father involvement for the positive impact it will have on the children. Findings show that incarcerated fathers perceive facilities to limit their involvement with their children. Respondents reported they do not feel the facility or the staff encourages positive and meaningful father-child relationships. Short visitation times and limited space during visitation do not only place children in situations they may not fully understand but also reduce the amount and quality of father involvement. Qualitative responses show the majority of fathers do want to maintain involvement in their children's life despite their incarceration. Policies limiting father involvement also limit fathers' ability to feel as if they are making a difference in their children's life.

Current policy in regard to visitation and phone calls could be reviewed in light of this study to find new ways to promote father involvement. For example, visitation policies could be modified to include physical contact and less expensive phone calls could help increase involvement by providing an affordable means to stay in contact.

Implications for Future Research

To help reduce generalizing to a specific area having a sample that is nationwide and is random would be more beneficial to future research. Also for the many undecided responses it may be more helpful to use a Likert Scale ranging from 1-7 or 1-10 to increase variability.

In addition, and to supplement the survey, it would be helpful to conduct interviews with incarcerated fathers to assess their understanding of, feelings towards, and experiences with fatherhood. Conducting a survey in jails can have limitations because of varying literacy degrees of incarcerated fathers. Through qualitative interviews, interviewers can make sure inmates fully understands the questions. Additionally, surveys should be written at a reading level that is more appropriate for all of the fathers who are incarcerated.

Another suggestion would be to omit the question "My children's primary caregiver limits my ability to be involved with my children while incarcerated." Once we removed this statement from the survey, the Cronbach's Alpha actually went from a 0.089 to a 0.394. Perhaps the statement does not fit well with the others because the responses were too broad, and there were too many outliers. Improving the reading level of the survey and providing more assistance to inmates in taking the survey would improve the reliability overall.

Conclusion

Father involvement has a positive influence on the lives of children. Children who have low levels of father involvement often become engaged in behaviors that may lead to their own incarceration. For children of fathers who are incarcerated, the threat of risky behavior increases (Sarkadi et al., 2008). For incarcerated fathers, the opportunities to remain a present and active influence in their children's lives are limited. These factors include their relationship with the primary caregiver,

as well as policies of the jail facilities. Along with existing research, findings of the study at hand suggest that incarcerated individuals could play an active role in reducing the chance of generational incarceration (e.g., the cycle of incarceration in a family).

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Skin Color and Perceptions of Ambiguous Aggression

Jane C. Anderson

Undergraduate Student, Psychology

Erik Feia

Undergraduate Student, Psychology

Pauline Ceulemans

Undergraduate Student, Psychology

Abstract

The present research examines the hypothesis that when viewing ambiguously aggressive acts, the threshold for labeling an act as violent is lower when viewing a black actor than when viewing a white actor. An ambiguously aggressive act is one which could be interpreted as being playful or threatening, such as a light shove. Previous research indicates that black males are perceived as being more aggressive and threatening and less playful and friendly than White males when performing identical acts. In this study, 79 participants were read an ambiguous vignette while looking at one of three pictures of students interacting. Each of the pictures showed a different combination of white and black students. It was expected that the threshold for labeling the behavior of the black student as violent would be lower. The results of the present research showed no significant difference on all but one of the behavioral, personality, and situational measures across the three tested conditions. Marginal significance was found between attributing more "friendly and playful" behavior to the black student and less "friendly and playful" to the white student.

Keywords: prejudice, stereotypes, ambiguous aggression

American society has changed since the Civil Rights Act of 1964 was signed into law. The desegregation of the United States meant that many white people began to have more contact with black people. The prejudices that white people held toward black people began to fade as they all attended school together, served in the military together, and worked side by side. The recent election of a mixed-race president would seem to indicate that a majority of the country has come to accept black people as equals. But a subtle form of racial stereotyping may still exist. Myers (2008) notes, "We can have different explicit (conscious) and implicit (automatic) attitudes toward the same target . . . thus, we may retain from childhood a habitual, automatic fear or dislike of people for whom we now express respect and admiration" (p. 303). The purpose of this study is to determine whether or not the stereotype of Blacks as being more aggressive than Whites still holds.

Stereotyping is a device the mind uses in order to make fast judgments and save mental resources. Research has shown that the mind uses less energy when summoning up a stereotype than when thinking something through (Macrae, 1994). It is a natural behavior; one of the heuristics, or shortcuts, that the mind typically uses. These heuristics happen in the mind so quickly that one is usually unaware of the process. Thus, stereotypes can affect one's judgments and behaviors without one's conscious knowledge.

Many people believe that personality traits are fixed, consistent, and therefore predictable (Levy, Stoessner, & Dweck, 1998). This leads people to assume that they know how someone will behave based on their stereotypes of that person. For example, if someone believes that black

men are angry and dangerous, they will be afraid of a black man, regardless of his actual personality. Hugenberg and Bodenhausen (2003) found that people who were high in implicit prejudice saw hostility as appearing more quickly and lingering longer on pictures of the faces of black Americans than on similar white faces.

The effects on others of even implicit prejudice can be devastating. For example, recent studies have shown that the phenomenon known as "stereotype threat" can affect the performance of college students who are being tested (Harrison, Stevens, Monty, & Coakley, 2006). Teachers may not be aware of how their implicit prejudices are affecting the grades of their students. If students can be affected by prejudice from their teachers, they may well be affected by prejudices from their classmates.

How much stereotyping and prejudice remain in our society? The answer differs depending on whom you ask. Whites and Blacks have different perceptions regarding how much progress has been made in racial relations. According to a poll conducted by ABC News and the Washington Post in 2010, when asked "Do you think Blacks have achieved racial equality, will soon achieve racial equality, will not achieve racial equality in your lifetime?," 40% of Whites and only 11% of Blacks said Blacks have achieved racial equality. Conversely, 32% of Blacks but only 13% of Whites said that they will not see racial equality in their lifetime (ABC Poll, 2010). The difference in perspectives could be due to different reference points. As Eiback and Ehrlinger (2006) found in their research, Whites look at the progress made since the days of slavery and Blacks compare racial progress to what they believe would be ideal. Although there is some evidence that stereotyping can be overcome with practice (Kawakami, Dovidio, Hermsin, & Russin, 2000), other evidence suggests that there is still a White bias against Blacks overall (Dovidio, 2002).

Studies done by Duncan (1976) and by Sagar and Schofield (1980) indicated an overwhelming tendency in the late 1970's and early 1980's to label black males as aggressive or threatening when performing the same actions that were labeled as playful when performed by white males. In those studies, participants were shown an "ambiguously aggressive" situation in which a white actor shoved or poked a black actor and vice versa. Duncan (1976) used a video in the original study; Sagar and Schofield (1980) used line drawings to reduce possible confounds. When asked to describe the behavior of the actors, more than 80% of the participants in both studies labeled the black actor's behavior as aggressive and less than 15% labeled the white actor as aggressive. The present study sought to determine whether or not those stereotypes have changed in the last 30 years.

The original hypothesis of previous studies was that the threshold for labeling an act as threatening is lower when viewing a black actor than when viewing a white actor. The present study assumed the same hypothesis: Even though society has changed, there is a difference between the perceived intentions of white and black male actors based on still prevalent implicit stereotypes. Based on recent research, we expected to find a significantly higher level of perceived aggression when students observed a black student performing an ambiguous act versus a white student committing the same act.

Method

Participants

Participants were college students from a small midwestern campus. They were enrolled in psychology courses and received course credit for participation. There were a total of 79 participants (24 male, 54 female, and 1 unrecorded). Participants were non-black and primarily white.

Materials

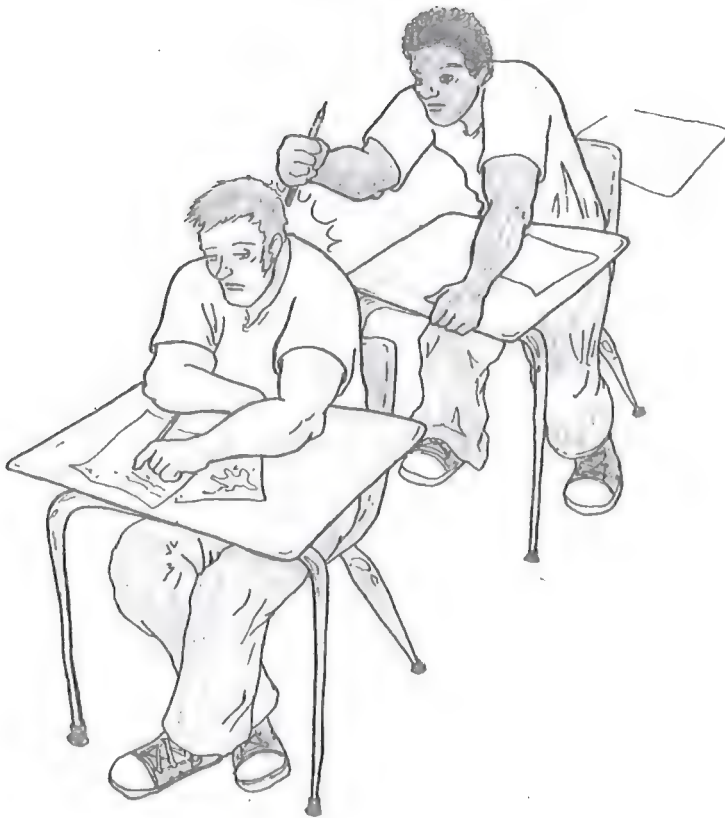
The current materials have been adapted from the work of Sagar and Schofield (1980). The main adaptation in the current research was to eliminate one of the four pictorial stimuli from Sagar and Schofield's total of four pictures. The independent variable consisted of three colored line drawings¹ that depicted one male student poking another male student in the back with the eraser end of a pencil. The independent variable had three conditions represented by distinct combinations of skin color: White poking White, Black poking White, and White poking Black. A brief vignette was read while the participants viewed one of the three drawings.

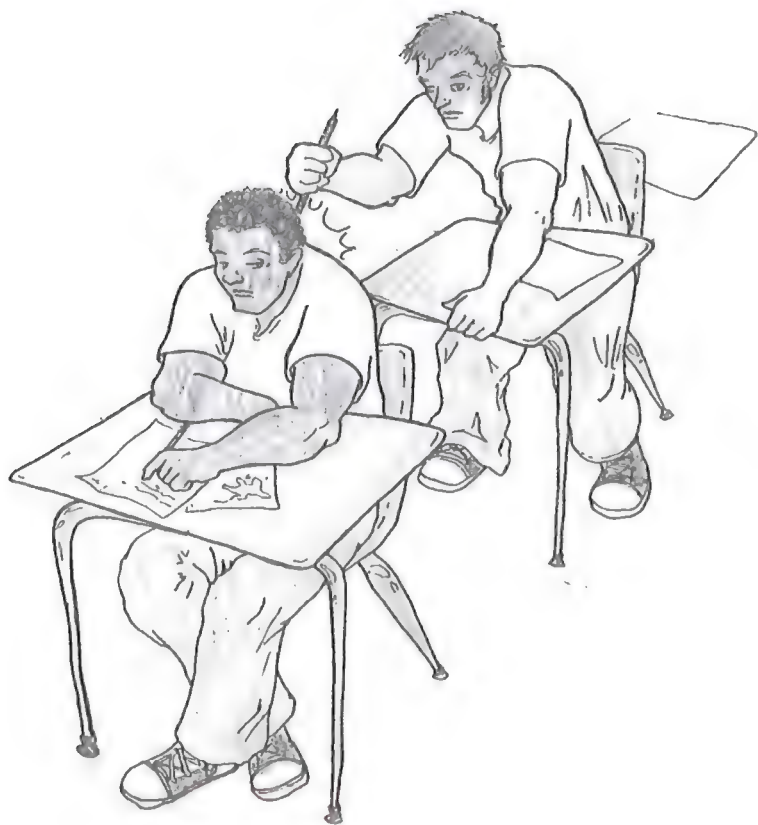
"Anthony was sitting at his desk, working on his social studies assignment, when Michael started poking him in the back with the eraser end of his pencil. Anthony just kept on working. Michael kept poking him for a while, and then he finally stopped."

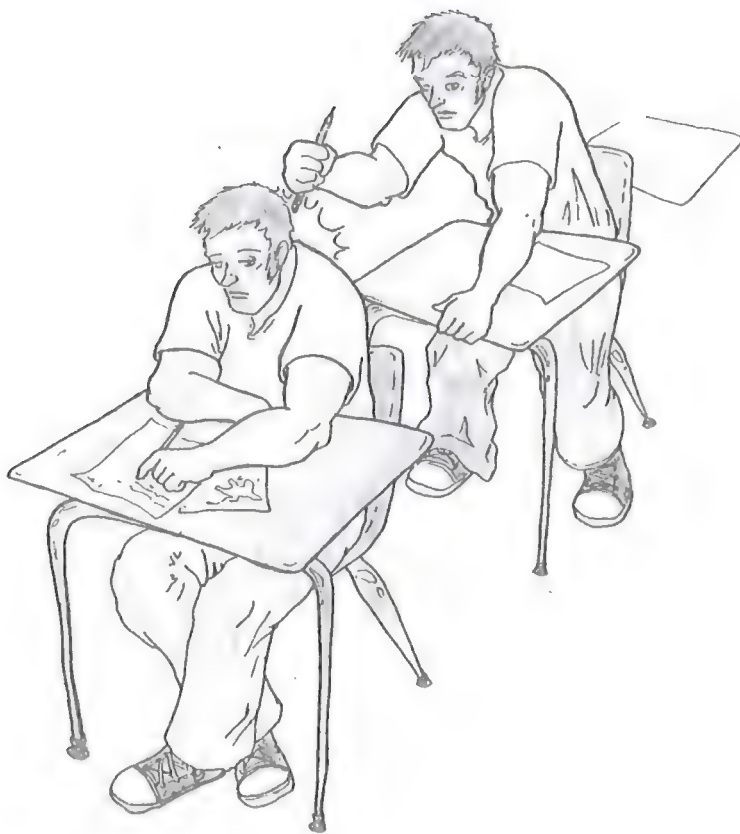
This vignette was chosen from four vignettes used in the original study (Sagar & Schofield, 1980). It was chosen because it is a plausible situation, and in the original study, the participants' responses were not significantly influenced by his or her race. The participants then answered a questionnaire with three demographic questions and ten Likert type questions about participants' perceptions of the behaviors and personalities of the actors. The participants rated the aggressor's behavior by how *playful*, *friendly*, *mean* and *threatening* his actions appeared on a scale from 0 (*does not fit*) to 8 (*perfect fit*). Participants also rated the perceived

¹ We would like to thank Andy Bensen for creating the images that participants viewed in this study.

personality qualities (*thoughtless—considerate, strong—weak, and threatening—harmless*) of both actors on a scale from 0 to 8. Finally, participants rated their perceptions of how inherently confrontational or non-confrontational the situation was on a scale from 0 to 8







Procedure

Upon arrival at the study site, participants were seated at private workstations². Participants were informed that the current research involved interpreting social cues; this deception was employed in attempt to minimize the likelihood of obtaining responses that may not accurately

² We would also like to thank Jonathan Bandy and Brooke Peterson for their help collecting data.

reflect participants' attitudes and stereotypes about skin color. After the participants read and signed a consent form, they were randomly assigned to one of the three skin color conditions: White poking White, Black poking White, and White poking Black. Participants were given an assigned line drawing and a questionnaire. The researchers read the accompanying vignette to participants. No identifying information was recorded. After completing the questionnaire, participants were debriefed and thanked for their participation.

Results

Following the scoring method of Sagar and Schofield (1980), the behavior ratings for the *threatening* and *mean* items were combined to create one score. Similarly, the behavior ratings for the *friendly* and *playful* items were combined to create one score. To examine whether skin color condition had an effect on participants' perceptions of the behavior as *mean* and *threatening*, a one way ANOVA was conducted. Contrary to expectations, no significant difference was found $F(2,76) = 1.16, p = .32$. To examine whether skin color condition had an effect on participants' perceptions of the behavior as *friendly* and *playful*, a one way ANOVA was conducted. Marginal significance was found, $F(2, 76) = 2.97, p = .057$. A post hoc comparison using the Fisher LSD test revealed that only the White poking White and Black poking White conditions were significantly different, $p < .05$. In other words, a black person poking a white person ($M = 2.73, SD = 1.89$) was perceived as more *friendly* and *playful* than a white person poking another white person ($M = 1.65, SD = 1.28$). These results are opposite of the present hypothesis and the findings of Sagar and Schofield (1980). The remaining items measuring perceptions of personality and situation were analyzed using a series of one way ANOVAs. No significant effects were found.



Figure 1. Mean Playful/Friendly Ratings by Condition. This figure shows that participants rated a black person poking a white person as more playful and friendly than a white person poking a white person.

Discussion

The results of the present study refuted the hypothesis that ambiguously aggressive acts would be perceived as more threatening when those acts were performed by a black male than by a white male. Participants' (non-black and primarily white college students) responses showed no significant difference between the three tested conditions for all but one dependent variable. Marginal support for the actions of a black male being perceived as more playful and friendly than the actions of a white male was found; interestingly, this marginally significant finding ran counter to the tested hypothesis.

There are a number of possible explanations for the outcome of the present research. First and least likely is that culture in the United States has entered a "post-racial" mindset. Recent polling indicates that President Obama's approval rating among non-whites is around 75% while his approval rating among whites is around 40% (Jones, 2009). This polling suggests that the population is aware of and makes judgments based, in part, on race.

Previous research offers greater insight as to the nature of participants' perceptions of interpersonal aggression and skin color. Harrison and Esqueda (2001) found that participants viewed aggressive and violent acts performed by white males as being a greater cause for concern than the same acts performed by black males. This is due to stereotypical beliefs about violence and aggression being more commonplace for black males than white males. In other words, seeing a white male acting violently is very concerning because commonly held stereotypes indicate that white males do not normally act that way (Harrison & Esqueda, 2001). This view offers one plausible explanation for why the white actor in the present study was viewed as less playful than the black actor; the black actor, being stereotypically more violent, would have been expected to engage in more violent play.

Although it is contradictory to the current research results, further support for the view that people make judgments based on stereotypes and perceptions of skin color has been found in studies of capital trial outcomes (Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006). To summarize, in capital cases black defendants were more likely than white defendants to receive the death penalty; further, black defendants whose faces were more "stereotypically Black" were even more likely to receive the death penalty (Eberhardt et al., 2006, p. 385).

However, the current result of a black actor having been perceived as more playful and friendly than a white actor also has explanations in the literature. In a study of college students, Judd et al. (2006) found that white participants demonstrated no prejudice or in-group favoritism with respect to black actors. There were at least two possible explanations: (1) White participants felt pressured to conform to egalitarian norms frequently found in college culture and gave socially desirable responses, and (2) white participants,

who came from largely politically liberal families, had been conditioned to see members of out-groups as inherently equal and to consider skin color based judgments immoral (Judd, Park, Ryan, Brauer, & Kraus, 2006). Neither of the above two possibilities could be definitively argued (Judd et al., 2006). Similarly, the present research findings also do not have a clear explanation. Further, Singh, Choo, & Poh (2008) found support for the need to preserve a positive self-image and an appearance of political correctness as being the motivating factor for stated perceptions of out-group members rather than a social shift towards egalitarianism. Thus, the uncertainty about the nature of the present results is consistent with the ongoing debate in the literature.

Perhaps the largest limitation related to the study of prejudice through college student samples is the problem of restricted range. This was likely a confounding factor because over-reliance on equality-conscious student samples can have negative consequences on generalizing hypotheses and results to a broader non-student population (Dasgupta & Hunsinger, 2008). It is also likely that participants from the current research were quick to recognize that their perceptions of black people were being measured, thus raising the likelihood of socially desirable responses.

The opportunities to expand and improve the current research are many. Perhaps one of the most important ways to build on the existing results would be to explore whether or not participants are providing socially acceptable responses in response to social and/or internal (self-image) pressures. One strategy to address this concern would be to lower participants' cognitive processing resources through the use of a cognitive load task immediately before assessing for possible interactions between stereotyping and skin color perceptions. Previous research with this methodology has shown that participants under cognitive load are more likely

to make judgments based on affect rather than cognition thus decreasing participants' ability to provide socially desirable responses (Shiv & Fedorikhin, 1999). Another consideration for future research involves the correlation between intergroup contact and prejudice levels (Pettigrew & Tropp, 2006). College campus cultures generally involve more intergroup contact than in society at large and also place increasing normative pressure towards egalitarian principles (Dasgupta & Hunsinger, 2008); as such, there is also value to extending this line of research to non-student samples.

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Kyle Rudy

Undergraduate Student, Fine Art

In the time that I have worked with clay, my pieces have drastically changed and left me with a great breadth from which to draw newer bodies or work. Starting off as a functional potter, I quickly found my work nudging its influence nearer that of contemporary sculpture. Today, I find myself working almost completely free from the potters' wheel and amidst the exploration of a whole new language in clay. The metamorphosis my work has undergone is in its own way a representation of the message I want it to convey. My work shows a narrative of change, starting with a protective and conservative state, a highly flirtatious and overtly sexualized state, and finally settling into an obliquely provocative, but highly intriguing state of being.

In my current body of work, I have taken on an exploration and discussion about the human relation to sexuality. Sex and sexuality are topics frequently discarded in conversation by many with the "Midwestern sensibility." My work, while speaking overtly about sexuality, does not depict copulation or even sexual organs. Instead, my work allows each viewer to assimilate his or her own understanding of how overtly or obliquely my work speaks about sexuality. The self-realization or subject matter is paramount to my work. Leaving nondescript forms allows each viewer to discover his or her own associations while prompting discussion of their insight. The discourse my work generates is in constant prowl of its most titillating virtues which are simultaneously those that are commonly avoided.

Through research and exploration, I have come to discover the role that presentation plays with my work. For many artists, particularly those who work in the smaller realm of three-dimensional work, the pedestal is crucial to their works' presentation. The limitations of this presentation style make for

a less engaging and interactive experience between the viewer and the work. My pieces, as installed in their spaces, create an environment more suitable for each piece.

Surface is the element of my work that the pieces are designed around. Instead of glazing the surface, I rely on the surface of the bare clay and terra sigillata, which is a clay-based veneer with a waxy surface. These two surface treatments direct all of the attention to the modeling and carving that go into making the surface look alive and flesh like. My pieces consist of rigid planes that give structure and softly modeled folds that create the rolling fleshy planes and lively orifices. My structural elements are left as bare clay while the fleshy planes are covered with the sigillata, making them appear soft and moist. These two elements combine to create sculptures that draw the viewers' attention to their sexualized but non-descript forms. The culmination of these ideas and techniques leaves for the unveiling of a unique discussion and exploration of sex and sexuality.



Pod 3, Thrown and altered, Porcelain, Cone 6 oxidization,
Sanded, 3.5" X 5" X 4.5", 2009.



Study 2, Thrown and altered, Porcelain, Cone 6 oxidization,
Thrown and Altered, Terra sigillata, 5.75" X 10.75" X 5.5",
2010.



Untitled, Hand built, Porcelain, Cone 6 oxidization, Terra
Sigillata, 9" X 20" X 8", 2010.



Untitled (detail), Hand built, Porcelain, Cone 6 oxidization,
Terra Sigillata, 9" X 20" X 8", 2010.

Nathan Carey

Undergraduate Student, Fine Art

Brandon Cramm

Undergraduate Student, Fine Art

A critical point in the formation of a star is the instance when the matter of the star becomes so dense the mass ignites starting a chain reaction altering the material into energy.

Ignition of Core was a seven-day collaborative epic in which, each day, new work was presented in a gallery space in the form of interrelated installments. Both visually and intellectually, the exhibition was influenced by literary plot elements with a structure reminiscent of a crescendo. We employed the use of photography, video, audio, objects, and performance as devices to develop a narrative that was drenched in mythology, ideas of creation, and artistic practice related to working within an institution.

Prelude, the first installment of *Ignition of Core*, marked the beginning of the narrative as well as our entrance into the gallery. In order to establish our occupation of the gallery we presented a series of seven colored photographs of our studios during the time of their construction. Through the process of photography we were able to gain control of the studios on an intellectual level and by projecting the images in the gallery we were able to control that space as well.

The second installment, titled *Overture*, presented the audience with the fictitious setting of the narrative. Within the gallery the projected configuration of stars were of our view of the Sculptor Galaxy and surrounding celestial bodies as seen from earth. However, the constellations that shifted in and out of view were derived from our own

created mythology and foreshadowed objects and events that appeared later in the week. The audio was meant to instill a captivating feeling with the audience; it can be understood as a siren- alluring yet tragic. The audio in conjunction with the constellations applied a level of mysticism to the narrative that was upheld for the duration of the show.

The third installment, *A Vehicular Action*, marked the first day we introduced three-dimensional objects made by us. We provided physical and intellectual implements of mobility for the audience to move within the space. The title, *A Vehicular Action*, is a reference to NASA's technical terminology for space walking: extravehicular activity. We painted the ramps black to separate them from the infrastructure of the gallery itself, and designate them as tools made by the artists, as a reactionary response to the institution. *A Vehicular Action* literally became the rising action of the narrative.

The fourth installment, *The Constant*, is reflective of our consideration and sensitivity to material choices. Through the process of casting duplicates of an object in various materials, in this case a tire, the physical alterations of the objects are contingent upon the characteristics of the medium. We produced and categorized the cast tires systematically in correlation to these characteristics. The quantity of edition size to each material was determined by the economics of the material and the pragmatics of their process. Through this duplication of the tire we begin to see an aspiration toward an applied mastery. The gold leafed drawing of the robotic arm is an implement for this mastery. It represents control and a calculated precision.

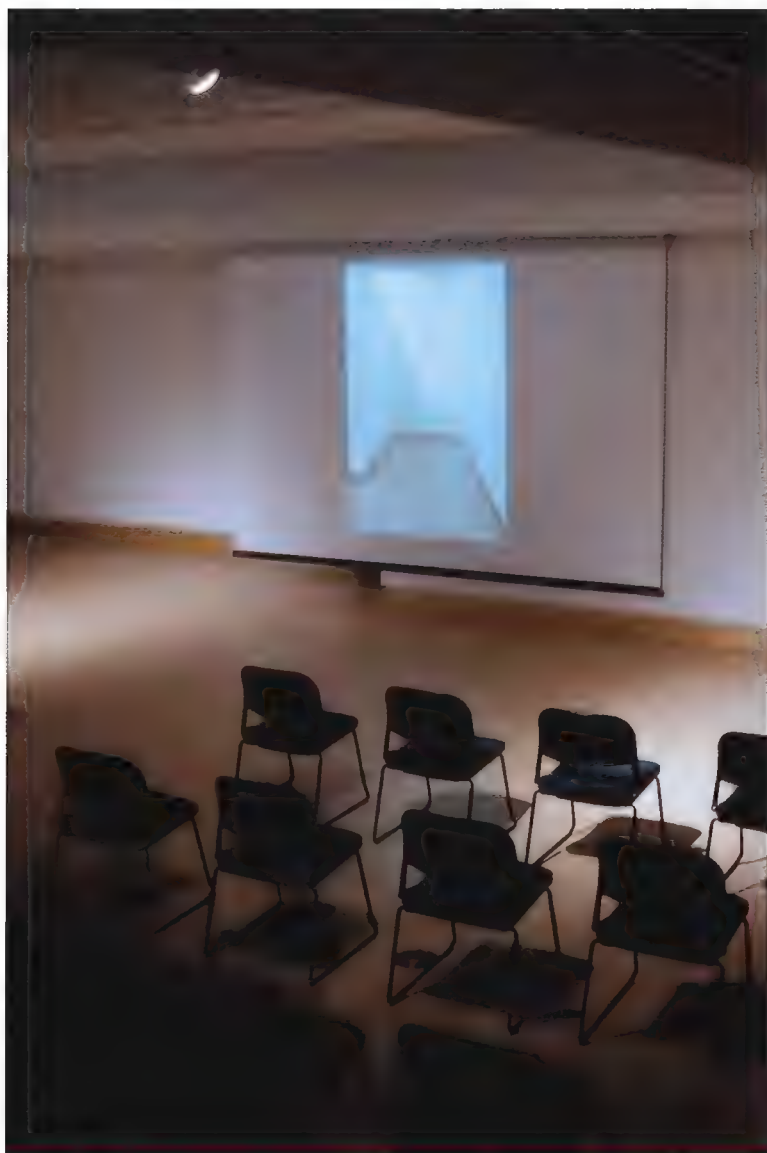
The fifth installment of *Ignition of Core*, titled *The*

Fall, documented transformation within the sensibilities of the narrative. It marked a shift from creation, discovery, mobility, and categorization, to disenchantment and control. The cast mortar objects and the photographs were both created from the re-processing of previous works presented in *Ignition of Core*. In the case of the mortar objects, the material was either poured into or was imprinted by the structures of the other installments. By casting the objects in mortar we repurposed them, while creating monuments to their original form. The photographs showed the studios where the work was created and was presented in the same somber attitude.

Ignition of Core was a demanding process, and because of the level of output required, *The Ballad* became an illustration of the compounding tension that occurred. This tension was parallel to the building and ensuing conflict within the narrative. We fabricated a cast-silver object consisting of a figure of Bruce Banner and The Incredible Hulk attached by the same sprueing tree. The object became a symbol of duality. *The Ballad* transformed the gallery into the arena for the conflict. The physical presence of us wrestling in the gallery for the duration of a half-hour became the climax of our narrative. On a molecular level tension produces energy.

The seventh and final installation, *One and a Thousand Nights*, exists outside the gallery and was exhibited back to our studios. The studios were emptied and painted black, to completely removing ourselves from the space. The title references the story *A Thousand and One Nights*, and the idea of there being a continuation of our narrative that exists beyond what was exhibited. The black paint as much as it carried the same connotations as in *A Vehicular Action*

as being reactionary, can now also be seen as an illustration of the blackness of space, and a vastness of possibilities.



Prelude
(First Installment of Ignition of Core)
2010



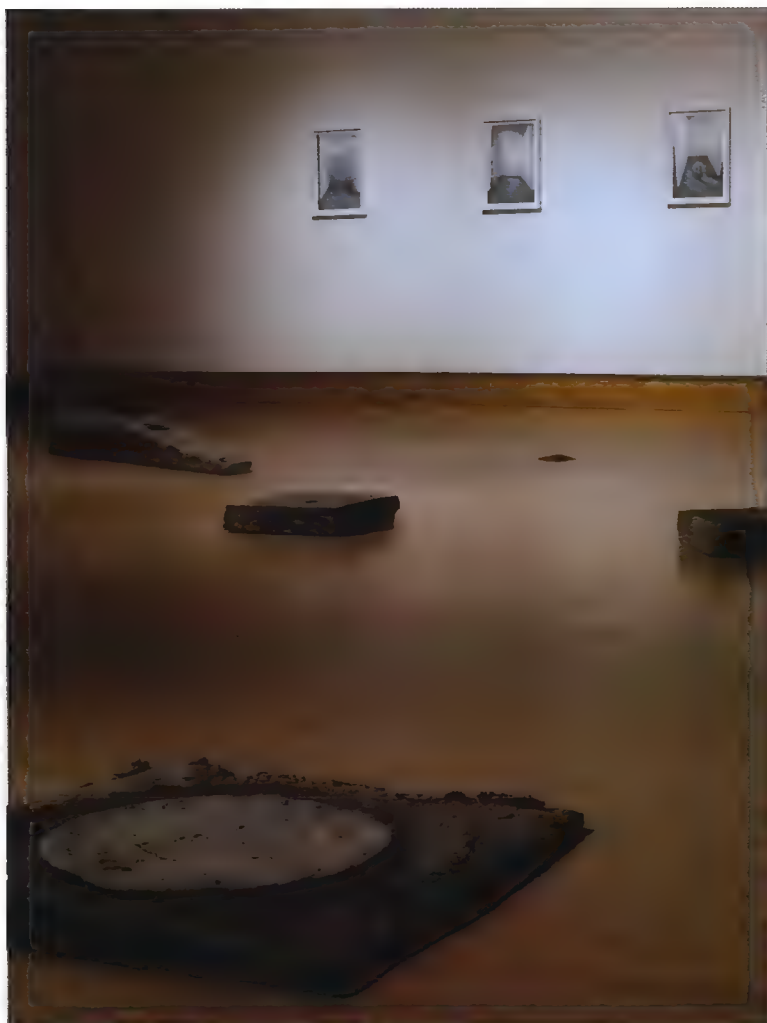
Overture
(Second Installment of Ignition of Core)
2010



A Vehicular Action
(Third Installment of Ignition of Core)
2010



The Constant
(Fourth Installment of Ignition of Core)
2010



The Fall
(Fifth Installment of Ignition of Core)
2010



The Ballad
(Sixth Installment of Ignition of Core)
2010



The Ballad
(Sixth Installment of Ignition of Core)
2010



One and a Thousand Nights
(Seventh Installment of Ignition of Core)
2010

Ryan Leynse

Undergraduate Student, Art Education

The one concept that drives my artwork is interaction. Interaction is defined as acting in such a way as to have an effect on another. The interactions I am concerned with are the dynamic yet subtle things that happen that change the way things are seen. The way certain systems work together, the way humans relate to one another, and even the way people deal with the things that occur to them are all examples of ways that interactions drive my work. In my portrait, *Welcome to Wisconsin*, not only are there the literal interactions of my body and the milk, but there are also connections between me being raised in Wisconsin, the cold weather, and my own feelings toward dairy products.

Photography itself is an interaction between light, lens and film. This is most evident in my work with the pinhole shots. With exposures that are sometimes hours long, the interaction is not solely between the light and the pinhole, but between the scene in front of the camera and the film. People moving in and out of the shot, doors shutting and lights changing angles all interact with the plane on which the image is produced.

In my recent self-portrait photography the interactions exist between my body and me. Over time, my body has undergone many different types of injuries. Concussions, stitches, fractures and allergies have all interacted with my body. I feel that the injuries and hospital visits that I have experienced have contributed to how I not only see myself but how others see me. I search for ways in which I can work with the camera and the environment around me in order to create my portraits. The resulting images portray me in a way much deeper than putting a face to a name. They show who I am, how I became this way and how I interact with everything around me.

*“My portraits are more about me than they are
about the people I photograph. “*

Richard Avedon



Welcome to Wisconsin, 2009, Digital Photograph, 36" x 24"



Wisconsin, 2009, Digital Photograph, 24" x 36"



Concussion, 2010, Digital Photograph, 18" x 27"



I Bleed, 2010, Digital Photograph, 21" x 42"

The Relationship between Gender and Attitudes towards Marriage

Lisa Servaty

Undergraduate Student, Human Development and Family
Studies

Kirsten Weber

Undergraduate Student, Human Development and Family
Studies

Abstract

Marriage as a social institution is vulnerable; fewer people in western societies are marrying, and divorce rates are increasing throughout the world (Beach & Fincham 2010). The purpose of this study was to examine if there is a relationship between gender and attitudes towards marriage. The central research question in this study was "Are there gender differences in a sample of college students regarding their attitudes and beliefs towards marriage?" It was hypothesized that females would have stronger attitudes than males in support of marriage and that people marry mostly for love. Male and female college-aged students were surveyed at a small Midwestern university on their attitudes towards marriage. Survey data was statistically analyzed using cross-tabulations, mean comparisons, independent t-tests, and a Cronbach's Alpha reliability analysis. Both males and females were in support of marriage, and thus, no gender differences were found, and the first hypothesis was not supported. There was partial support found for the second hypothesis; although both genders agreed that people marry mostly for love, females expressed stronger attitudes. Implications for practitioners would be to not minimize the

importance of marriage for young people in spite of the trend towards cohabitation. Implications for future research include using a large, random, national sample in order to be able to generalize the findings.

Keywords: marriage, cohabitation, college students, relationships

Marriage is vulnerable in contemporary society. Today, 39% of Americans say marriage is becoming obsolete. The U.S. census data released in September 2010 show marriages hit an all-time low of 52% for adults 18 and older (Yen, 2010). Fewer people in Western societies, including the United States, are marrying, and divorce rates are increasing throughout the world (Beach & Fincham, 2010). According to current research, rates of successive cohabitation increased by nearly 40% over the late 1990s and early 2000s, and rates are especially high among young adults (Lichter, Turner, & Sassler, 2010). The changing views of family and marriage are being driven by adults aged 18-29 who are more likely to have unmarried or divorced parents (Yen, 2010). Additionally, young adults are marrying for reasons besides raising children and financial security, the primary reasons historically. However, in spite of these vulnerabilities, 85% of adults in the United States will marry at some point in their lives and 94% expect to marry an ideal partner or "soul mate" (Campbell & Wright, 2010). This study investigated the attitudes of a sample of midwestern college-aged students regarding their attitudes towards marriage.

Literature Review

After reviewing current literature on marriage, it becomes clear that there is a lack of articles that focus on gender

difference. Campbell and Wright (2010) conducted a study exploring the beliefs and practices of marriage in the United States. They concluded that beliefs about marriage have remained relatively stable over time. The study strongly supports the claim that Americans continue to define marriage as monogamous and lifelong, believing strongly in the importance of having a committed partner and disapproving of infidelity. Yet, although many Americans claim to disapprove of infidelity, extramarital sex is not uncommon. In addition, individuals who come from families of divorce or remarriage are more likely to engage in extramarital sex. The definition of marriage has not changed but the practices of marriage have, such as ceremonies, gender roles, and values.

Trotter (2010) conducted a study on how parents' romantic relationships influence college students' attitudes towards their own romantic relationships. This study proposes that marriages are in danger of failing because of the increase in unhealthy relationships based on unhealthy parental models. Trotter argues that when individuals get married, they do not expect their marriage to end in a divorce. However, because of high divorce rates, low marriage rates, a high number of non-marital cohabitations, and a high number of unmarried females with children, it is hard to demonstrate a healthy example of romantic relationships and marriage for others to emulate. Additionally, mass media is continually sending out messages illustrating examples of "casual attitudes" about relationships. In a sense, media reinforces the idea that it is normal to engage in sexual relationships with no strings attached.

Abowitz et al. (2009) examined the differences of gender in the way college students view romantic relationships. They found that males are more likely to believe that cohabitation will improve marriage. Yet, according to this study, females are more likely to believe that couples stop "trying" after the wedding.

O'Reilly et al. (2009) assessed the qualities college females want in prospective marital partners. Their data identified female participants' primary qualities in a marital partner as being considerate, dependable, and intelligent. Finding a partner who is intelligent is an indication to their own intellectual pursuits. Females also want males who have the ability to develop an intimate and satisfying relationship. Economically, O'Reilly et al. found that females no longer need a man to provide for them. As a result, females can now afford to be more selective in choosing a partner.

Riggio and Weiser (2008) studied how parents' marital interactions and the way they treat each other can influence the attitudes of their children in their own intimate relationships. They argue that if people perceive marriage as not beneficial or positive, those attitudes regarding marriage will affect their personal relationships. As a result, people who express these types of attitudes toward marriage will then not care about getting married, or if they do get married, they do not exclude the possibility of getting a divorce.

The current literature shows attitudes and beliefs of marriage are formed by having marriage modeled through parental relationships or through the media (Trotter, 2010). Likewise, attitudes and beliefs toward marriage affect marital success or failure (Campbell, & Wright, 2010; Riggio & Weiser, 2008). Several existing studies reveal that parental marital relationships can affect children's intimate relationships positively or negatively. The current study focused on the gendered attitudes and beliefs of marriage in a sample of college students to advance our knowledge on current marriage perspectives.

Theoretical Framework

This study used Social Learning Theory as the theoretical framework. The Social Learning Theory states that learning

occurs within a social context. This type of learning includes observational learning, imitation, and modeling (Bandura, 1977). According to Social Learning Theory, every person is impacted by others' behaviors. For example, Social Learning Theory suggests that children's behaviors mirror their parents' behaviors. The Social Learning Theory predicts that views of marriage would be different between male and female college students. Views of marriage are formed through observational learning, imitation, and modeling. Because of gender ties, females relate to their mother's modeling while males relate to their father's. Thus, genders may view marriage differently; a male, for example, may model his father's attitudes of marriage over his mother's attitudes, and a female may model her mother's attitudes of marriage over her father's attitudes.

Purpose Statement

There are three direct purposes to this study: (1) to examine the difference between genders regarding their attitudes and beliefs towards marriage with a sample of college students; (2) to develop a reliable survey instrument that would measure those attitudes, and (3) to increase the awareness on current marriage perspectives and to help counselors support stability in marital relationship. We hope to contribute to the field of family studies by providing contemporary views of marriage from the perspective of the younger generation.

The central research question in this study was "Are there gender differences in a sample of college students regarding their attitudes and beliefs towards marriage?" We predicted females would have stronger attitudes towards marrying primarily for love and be more in support of marriage than males. We also expected males would have stronger attitudes of viewing love as not being the fundamental purpose of marriage.

Method

Participants

This study was conducted at a midwestern university in the United States. Participants consisted of 136 undergraduate college students who were surveyed in general education classes. Of the 136 participants, one failed to complete the demographic section of the survey, so it was excluded. Of the remaining 135, 66 were male and 69 were female. There were 92 participants between the ages of 18-19, thirty-two between 20-21, six between 22-23, two between 24-25, and three of the participants were 26 years or older. There were 77 single participants, 55 dating participants, two married participants, and one participant indicated cohabitation.

Research Design

The purpose of this survey research was to collect a sample from a larger population so that some inferences could be made about characteristics, attitudes, or behaviors of this population of undergraduate male and female college students (Babbie, 1990). The design type used for this survey is best described as a cross-sectional study design in that it was used to capture knowledge and attitudes from undergraduate male and female college students at one point in time. The form of data collection was self-administered questionnaires. The rationale for using this method was that it was the most efficient way to gather the data directly from campus. The population was the university student population; the sample was undergraduate male and female college students in general education classes. The non-random probability sampling design was used for this study because the sampling took place in classroom settings where all students were included. This study used purposive sampling because the purpose was to obtain an equitable number of males and females in general education classes on their attitudes towards marriage. The study was approved by the Institutional Review Board.

Data Collection Instrument

A survey was designed in order to identify the attitudes of college students towards marriage. The survey included a brief description of the study and implied content. It consisted of three demographic questions regarding gender, age, and relationship status. The subjects were given ten closed-ended statements based on a five-point Likert scale, measuring respondents' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). Survey questions were informed by literature and theory regarding gender and attitudes toward marriage.

After reviewing literature, we drafted ten statements that we felt were relevant for our survey; these statements were informed by literature, connecting gender attitudes and marriage. We designed the survey statements to address a wide range of issues relating to marriage. The survey was piloted to six college students to increase the validity; feedback was given that the survey was ready for distribution.

Procedure

The survey process began with an email to the professors of the undergraduate general education classes stating the purpose of the study and asking permission to survey their students during class time. Data was then collected for the study once the researchers received permission to come into the classrooms of four sociology courses to survey the students. A purposive sampling design was used in order to achieve an equitable number of male and female college students.

Data Analysis Plan

The data was first cleaned and checked for missing figures. Each survey was looked through for statements that were mismarked. Two surveys were discarded as they both had

more than one unanswered statement. Each statement received an acronym or code. Group comparison was based on gender. Gender was the only independent variable on the survey. The demographic variables on the survey were *age* (AGE) and *relationship status* (RLS). Each survey statement was a dependent variable and was given an acronym: *One of my goals is to be married* (GOL); *Cohabitation is more popular than marriage* (CAB); *The principle purpose of marriage is love* (LOV); *A fundamental purpose of marriage is to have and raise children* (CHL); *Marriage should last forever* (FVR); *Infidelity in a marriage is unacceptable* (INF); *Marriage is old fashioned* (OFN); *Marriage is a monogamous partnership* (MPS); *Personal fulfillment is a purpose of marriage* (PFL); *Marriage is needed for a civil society* (CSO).

The computer program called the *Statistical Package for the Social Sciences* (SPSS) was used to analyze the collected data. The level of analysis in this study was the individual. Given that groups were being compared based on gender, data analysis included: frequencies, cross-tabulations, mean-comparisons, independent t-tests, and a reliability analysis, the Cronbach's Alpha.

Results

The first analysis run was a frequency distribution analysis. This analysis indicated that there were two surveys with missing data. These two surveys were discarded as they both had more than one statement unanswered; the final sample number was 134.

Cross-tabulations were run with the independent variable GEN. For CSO there appeared to be a large difference between groups with the majority of males having agreed and/or strongly agreed, but the majority of females were undecided. For OFN there appeared to be a difference in gender, both having disagreed and/or strongly disagreed, with males at a higher percentage. For INF and MPS there

appeared to be a difference in gender, both having agreed and/or strongly agreed, with females at a higher percentage.

For GOL, CAB, LOV, CHL, FVR and PFL there did not appear to be a difference between genders, with both having agreed and/or strongly agreed.

Table 1
Cross-Tabulations

GOL						
GEN	SD	D	U	A	SA	Total
Male	1.5%	1.5%	15.2%	33.3%	48.5%	100.0%
Female	2.9%	4.4%	14.7%	27.9%	50.0%	100.0%
CAB						
GEN	SD	D	U	A	SA	Total
Male	10.6%	18.2%	31.8%	25.8%	13.6%	100.0%
Female	2.9%	19.1%	35.3%	35.3%	7.4%	100.0%
LOV						
GEN	SD	D	U	A	SA	Total
Male	1.5%	6.1%	12.1%	34.8%	45.5%	100.0%
Female	0.0%	4.4%	4.4%	45.6%	45.6%	100.0%
CHL						
GEN	SD	D	U	A	SA	Total
Male	4.5%	10.6%	22.7%	47.0%	15.2%	100.0%
Female	5.9%	14.7%	16.2%	48.5%	14.7%	100.0%
FVR						
GEN	SD	D	U	A	SA	Total
Male	3.0%	3.0%	15.2%	22.7%	56.1%	100.0%
Female	0.0%	2.9%	10.3%	35.3%	51.5%	100.0%
INF						
GEN	SD	D	U	A	SA	Total
Male	13.6%	4.5%	16.7%	18.2%	47.0%	100.0%
Female	0.0%	1.5%	14.7%	25.0%	58.8%	100.0%
OFN						
GEN	SD	D	U	A	SA	Total
Male	31.8%	37.9%	18.2%	10.6%	1.5%	100.0%
Female	22.1%	35.3%	22.1%	13.2%	7.4%	100.0%
MPS						
GEN	SD	D	U	A	SA	Total
Male	4.5%	10.6%	22.7%	19.7%	42.4%	100.0%
Female	0.0%	4.4%	23.5%	27.9%	44.1%	100.0%
PFL						
GEN	SD	D	U	A	SA	Total
Male	0.0%	16.7%	31.8%	36.4%	15.2%	100.0%
Female	2.9%	14.7%	25.0%	42.6%	14.7%	100.0%

Note. (GEN)=Gender of participant; (GOL) = One of my goals is to be married; (CAB) = Cohabitation is more popular than marriage; (LOV) = The principle purpose of marriage is love; (CHL) = A fundamental purpose of marriage is to have and raise children; (FVR) = Marriage should last forever; (INF) = Infidelity in a marriage is unacceptable; (OFN) = Marriage is old fashioned; (MPS) = Marriage is a monogamous partnership; (PFL) = Personal fulfillment is a purpose of marriage; (CSO) = Marriage is needed for a civil society.

Table 2
Compare Means

<u>GEN</u>	<u>GOL</u>	<u>CAB</u>	<u>LOV</u>	<u>CHL</u>	<u>FVR</u>	<u>INF</u>	<u>OFN</u>	<u>MPS</u>	<u>PFL</u>	<u>CSO</u>
Male:										
Mean:	4.26	3.14	4.17	3.58	4.26	3.80	2.12	3.85	3.50	3.36
SD:	0.88	1.19	0.97	1.02	1.03	1.43	1.03	1.22	0.95	1.12
Range:	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.00	4.00
Female:										
Mean:	4.18	3.25	4.32	3.51	4.35	4.41	2.49	4.12	3.51	3.07
SD:	1.04	0.95	0.76	1.10	0.79	0.80	1.19	0.92	1.01	0.92
Range:	4.00	4.00	3.00	4.00	3.00	3.00	4.00	3.00	4.00	4.00

Note. (GEN)=Gender; (GOL) = Goal is to be married; (CAB) = Cohabitation is more popular than marriage; (LOV) = Principle purpose of marriage is love; (CHL) = Children is a fundamental purpose of marriage; (FVR) = Marriage should last forever; (INF) = Infidelity is unacceptable; (OFN) = Old fashioned; (MPS) = Monogamous partnership; (PFL) = Personal fulfillment; (CSO) = Civil Society.

An independent samples t-test was run to compare mean difference scores for males and females. There was one significant mean difference for the variable INF.

Table 3
Independent T-tests

Variable	Gender				
	Males	Females	t	df	Sig.
INF	3.80	4.41	-3.036	101.227	*0.003
	(1.42)	(0.79)			

Note. (INF)=Infidelity in marriage is unacceptable.

*significant @ $p \leq .01$, two tailed. Standard deviations appear in parentheses below means

A reliability analysis was run to determine whether the variables were a reliable index to measure the major concept, college students' attitudes towards marriage. Cronbach's Alpha is a measure of reliability and was 0.578. This value indicates that survey items were a moderately reliable measure of the major concept; however, if the variable OFN is removed, the reliability rises to 0.678.

Discussion

We predicted that females would have stronger attitudes than males that people marry mostly for love and that females would be more in support of marriage. Secondly, we also hypothesized that males would have stronger attitudes that love is not the basis of marriage. This hypothesis was moderately supported by the data.

There was partial support found for the hypothesis that females will have stronger attitudes than males that people marry mostly for love; although both genders agreed that people marry mostly for love, females expressed stronger attitudes. Indeed, Campbell and Wright (2010) found that the principal purpose of marriage in the United States is love and satisfaction; more so, 81% of newlyweds asserted that their primary reason for marriage was love. We predicted females would be more in support of marriage than males. However, no gender differences were found.

A statistically significant mean difference ($p < 0.01$ level) was found in one of the variables that stated infidelity in marriage is unacceptable, with females having stronger attitudes in support of this variable. Although females expressed stronger attitudes, the majority of both genders agreed that infidelity in a marriage is unacceptable. Indeed, this finding is supported by Campbell and Wright (2010) who indicate that 97% of Americans believe infidelity is unacceptable.

A large amount of both genders agreed and/or strongly agreed that one of their goals is to be married; no gender differences were found; having a high quality marriage continues to be a primary life goal for many Americans (Campbell & Wright, 2010).

The majority of both males and females agreed and/or strongly agreed regarding the purposes of marriage; there were a high percentage of both males and females who were undecided about the statement "personal fulfillment is a purpose of marriage." No gender differences were found. Many respondents of both genders agreed and/or strongly agreed with this statement, suggesting the high numbers of undecided responses were because the term "personal fulfillment" was not defined in the survey. In general, Americans focus on personal fulfillment as a basis for marriage (Campbell & Wright, 2010).

Similarly, both males and females responded with agree and/or strongly agree to the statement "The fundamental purpose of marriage is to have children." This outcome supports Campbell and Wright's (2010) assertion that one of marriage's purposes is to have children. There were some gender differences in regard to the statements that marriage is a lifelong partnership, marriage is a monogamous partnership, and marriage is needed for a civil society. Although the majority of both males and females agreed and/or strongly agreed with the statement "Marriage is a monogamous partnership"; there was no difference between genders. Moreover, over 20% of both genders were undecided, perhaps because participants failed to read the definition of "monogamous" provided for them on the survey. In addition, no gender differences were measured regarding the statement "Marriage should last forever." Both males and females agreed and/or strongly agreed with this statement. The data from the statements, "Marriage

is a monogamous partnership” and “Marriage should last forever,” are supported by Campbell and Wright’s (YEAR) findings that Americans marry with good intention; they hope to maintain a monogamous, lifelong partnership with the person they love.

There was a large gender difference with the statement “Marriage is needed for a civil society.” The majority of males agreed and/or strongly agreed with this statement, while the majority of females were undecided about this statement. While the majority of males agreed and/or strongly agreed, a large percentage was also undecided. We suspect that the high number of undecided responses is perhaps due to participants never having considered a connection between marriage and a civil society before taking the survey. In fact, the participants’ classes were all introductory sociology courses, and it is thus likely that students may not have been exposed to the topic of marriage and civil society before.

The majority of both males and females agreed and/or strongly agreed with the statement “Cohabitation is more popular than marriage no difference between genders was found.” Campbell and Wright (2010) propose that today over 50% of adults will cohabit at some point in their life; moreover, since 1970, the number of cohabiting Americans has increased by 400%. The majority of males and females agreed and/or strongly agreed, and there was also a high percentage of undecided for both groups. Again, the high percentage of undecided responses may be due to participants’ unfamiliarity with such a statement. That is, they may have not thought about cohabitation before or may not have read the definition of the term provided at the beginning of the survey. At the same, participants may have known the definition, but using a five-point Likert scale did not provide adequate response choices. .

The majority of males and females strongly agreed that cohabitation is more popular than marriage. Similarly, it was surprising to see that the majority of both males and females disagreed and/or strongly disagreed on marriage being old-fashioned; there was no distinct difference found in gender. Beliefs about marriage have remained relatively stable over time and there have been no significant changes in Americans' views suggesting that marriage is becoming obsolete (Campbell & Wright, 2010).

Qualitative Comments

The analysis of qualitative comments revealed several themes. For one, the majority of participants felt that marriage was relevant in the 21st century but they asserted that it was not as relevant as it was in the past. This view is evident in comments such as the following: "It may not hold the same purposes as it did in the past, but marriage is one of the most important things to many people." Similarly, another participants commented, "People still marry and find it an important part of life...being able to raise children well starts with a good marriage." Such comments illustrate that beliefs about marriage remained relatively stable across time; indeed, as Campbell and Wright (2010) point out, there have not been any significant changes in Americans' views on the importance of marriage (2010). However, a number of participants also believed that marriage is no longer relevant in the 21st century; their attitudes towards marriage became visible in comments, such as "Today there are too many divorces; the meaning of marriage to many is lost," indicating that they perceive marriage as a "joke" and that people do not take marriage seriously. Another participant expressed similar feelings by saying, "It hardly seems to be relevant with the number of divorces increasing and a divorce rate over 50%." Some of these statements may be

explained by changing attitudes towards divorce; Campbell and Wright (2010) discovered that as attitudes toward divorce become more relaxed, the likelihood of obtaining a divorce increases even more.

Limitations

This study used a nonrandom sample and therefore was unable to generalize to a larger student population. This study was also limited to a small sample from a midwestern university in the United States, and people in the same geographical location may have different views compared to those on the east coast. The Likert scale was limited to a variability of 1-5 and could be the explanation for the number of undecided responses.

Implications for Practitioners

The results show that there are minimal gender differences in college students regarding attitudes towards marriage. This small pilot study gives practitioners an opportunity to increase their awareness of contemporary views of marriage in a sample of college students. Practitioners such as mental health counselors, marriage and family therapists, and primary and secondary educators can use this study as a pathway to understand college students' romantic relationships. By understanding college students' romantic relationships, they can help enhance quality of the students' relationships. Furthermore, practitioners can use this information to increase awareness to students on contemporary attitudes towards marriage, which may benefit the students' personal relationships.

Implications for Future Research

There are several recommendations for future research. First, future research should include a large, random sample

in order to generalize the findings nationwide. For example, the current study's data suggests that the majority of college students have similar attitudes towards marriage. Yet, this data conflicts with a recent study that found four in ten individuals think marriage is becoming obsolete (Yen, 2010). For this reason, it is highly recommended to broaden the sample number and extend outside of the Midwest to focus on different populations, including college populations, non-college populations, older adults, and different ethnic groups. It may also be useful to increase the variability scale from a five-point to a seven-point scale to decrease the number of undecided responses.

If the same survey would be utilized again, changing the wording of the statement "Marriage is old fashioned" should be considered. The word *old fashioned* was intended to mean outdated, but may have been misunderstood by participants; therefore, changing the statement to "Marriage is becoming obsolete" would be more accurate. These changes may likely decrease the number of undecided responses.

Conclusion

Marriage is changing; the U.S. census data released in September 2010 show marriages hit an all-time low of 52% for adults 18 and older (Yen, 2010). Yet, the majority of college students in the study at hand considers marriage important and plans to marry one day. They also perceive marriage to be a monogamous partnership in spite of all its vulnerabilities in American society. Marriage is still seen as the foundation for strong families. Although we have seen many recent changes in views of marriage, marriage still seems to hold its relevancy in the 21st century and remains a goal for many young people.

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Guided Reading, Fluency, Accuracy, and Comprehension

Kristi Heston

Graduate Student, Education

Abstract

The purpose of this study was to determine if the implementation of the Fountas and Pinnell Guided Reading System would have an effect on student levels of fluency, accuracy, and comprehension. A total of 40 second and fourth grade students were tested prior to the implementation in March and after the implementation in June. Results were gathered, compared, and totaled to determine what, if any, effect there was on student reading scores after implementing the Fountas and Pinnell Guided Reading System. While student scores increased in all three areas, the highest number of students showed increases in accuracy and comprehension. These results suggest that the implementation of the Fountas and Pinnell Guided Reading System was successful.

Keywords: accuracy, comprehension, fluency, guided reading instruction, running record

Guided reading instruction is a necessity in the elementary classroom. Through such instruction educators can meet the diverse needs of their readers as these programs allow for differentiated reading lessons. Schools that implement a guided reading program produce more confident readers. Overall, they are more fluent, accurate,

and can effectively answer comprehension questions related to a piece of reading. Inaquinta (2006) stated, "In a truly balanced literacy program, *how* you teach is as important as *what* you teach" (p. 417).

Current literature supports that educators need to first understand what guided reading instruction is and how they will make it fit in their classroom before they can effectively implement such a program. Ford and Opitz (2001) wrote, "True, guided reading . . . is increasingly perceived as an integral part of a balanced reading program designed to help all children become independent readers" (p. xv). Recently a local elementary school implemented such a program, called the Fountas and Pinnell Guided Reading System. Implementing this system has allowed staff members to test and teach their students based on each of his or her individual needs.

The Fountas and Pinnell Guided Reading System consists of leveled books from A to Z which teachers use to find guided reading levels for each of their students. This is useful because it allows teachers to group students based on reading levels and gives students the opportunity to read books that are a good fit for them based on their guided reading levels. As the student reads, the teacher marks his/her errors, self-corrections, and fluency. Once the student has completed the reading, the teacher asks a series of questions to check the student's comprehension. Teachers utilize the Fountas and Pinnell Guided Reading System in hopes of seeing increased fluency, accuracy, and comprehension among their students.

A great deal of information supporting the implementation of guided reading instruction as a way to increase student reading skills exists; however, a problem lies in the fact that little is known about the exact increase students experience over the course of a school year in the areas of fluency, accuracy, and comprehension. This study took place with

second and fourth grade students. Research on guided reading instruction and the success of similar programs in other schools was utilized. The Fountas and Pinnell Guided Reading System was the tool used to assess students because teachers have access to the program.

Literature Review

Guided Reading

Reading is a complex aspect of instruction for many educators. Due to this fact, so many educators are easily overwhelmed by the wide variety of student needs that should be addressed. In the process of trying to reach each student at his/her level, educators often become frustrated at their inability to do so effectively. One rationale for diminishing this frustration is the implementation of a guided reading program. Fawson and Reutzel (2000) stated, "Teachers we have worked with are typically excited about the possibilities of providing the necessary scaffolding and instructional support to their students that guided reading offers" (p. 84).

This process begins with educators first assessing their students' reading abilities. Educators need to assess students in order to group them appropriately. This is done using running records. Data in the areas of reading fluency, accuracy, and comprehension need to be gathered on each student to allow educators to first discover the needs of each learner and to then develop approaches and instruction to ultimately improve student performance (Fountas & Pinnell, 1996). Assessing fluency, accuracy, and comprehension will often provide insight as to whether a text is too easy or too difficult. Recognizing such factors aids educators in discovering when to reassess and move a student to a different group where his/her needs will be better met.

Utilizing guided reading within the classroom provides educators with an effective way to differentiate reading instruction, allowing them to meet the needs of their students. The success of students and their ability to begin using the strategies they learn on their own is a goal of educators who implement guided reading. Students receive ample support to encourage an eventual outcome of successful, independent silent reading (Ford & Opitz, 2008). A study conducted by Harris (2004) at Woodland Intermediate School in Illinois concluded such findings as she stated, "These pragmatic educators sensed that frequent small group instruction and assessment components, inherent in guided reading, were an outstanding vehicle for achieving individualized instruction" (p. 24).

Such individualized instruction begins with forming guided reading groups based on the data gathered from assessing. A survey of 3,000 educators who implemented guided reading found these groups may consist of up to six students, meeting about three times a week for a duration of about 20 minutes each time (Ford & Opitz, 2008). During small group instruction, elementary educators leading groups of students ranging in age from kindergarten through fifth grade guide students through a selected text which meets the reading needs of the group. Creating guided reading groups may make it easier for elementary educators to diversify lessons and allow students to learn in a way that is best for them, which could increase their fluency, accuracy, and comprehension.

Students benefit greatly from the implementation of guided reading instruction. Often, students who feel they cannot read just give up. When provided with texts at their own guided reading level, students begin to realize exactly what they are capable of and eventually develop an excitement for reading. Harris (2004) noted, "When difficulty of text

matches a student's capabilities, interest in and love of reading is more likely to be fostered" (p. 25). Making reading fun and enjoyable encourages students to take part in reading activities more often.

Lyons (2003) expressed just how important motivation is in relation to reading when she wrote the following, "Motivation is arguably the most critical ingredient for long-term success in learning to read and write" (p. 84). Lyons discussed this further in her text through explaining the learning experiences of Matthew, an unmotivated first grader. Matthew struggled with reading and writing and was put into the Reading Recovery program where he was able to succeed and became excited about reading. Reading Recovery is strictly used with "low-achieving first graders" (Reading Recovery Council of North America, 2010). Despite this difference, Reading Recovery is much like guided reading. Both programs are used to aid each student in succeeding in reading at a pace and reading level appropriate for him/her. Ferguson and Wilson (2009) noted, "Through the work of Marie Clay's Reading Recovery, the guided reading framework became a prevalent instructional practice in the primary grades" (p. 293).

Through the use of both individualized instruction and guided reading groups, students are able to move at a pace comfortable for them. Fountas and Pinnell (1996) wrote, "If young children are to learn to read, they must encounter material that supports their development" (p. 98). Students are engaged and can feel comfortable and confident as they read aloud and are asked to recall details. Lyons (2003) suggested teachers "create learning situations and activities in which children are interested and can meet with success" (p. 92). Students develop an understanding of important reading strategies and begin to internalize the strategies and self-monitor while they are reading. Guided reading instruction

takes the stress off the students who do not feel successful. Lyons' suggestion to "provide opportunities for children to take risks without the fear of failure" (p. 92) allows them to read with others knowing the environment they are in is free from judgment and is set up for their specific learning needs. Each of these factors promotes fluency, accuracy, comprehension, and perhaps most important of all, mastery in reading. Ford and Opitz (2001) noted that "The ultimate goal is to foster independent readers, and guided reading is a means to this end rather than the end itself" (p. 2).

Fluency

Fountas and Pinnell (2006) define fluent reading as "using smoothly integrated operations to process the meaning, language, and print" (p. 62). Implementing guided reading is a way to build fluency in young readers. Fluency is an aspect of guided reading and is used to aid teachers in finding each student's guided reading level. Studies have shown reading fluency increases when students read at their own specific level. Coulter, Shavin, and Gichuru (2009) explained, "Curriculum-based measurement of oral reading fluency (ORF) is especially useful because it accurately predicts later reading success" (p. 71). One study which further examined the impact of guided reading instruction on student fluency was conducted by Nes-Ferarra (2005) who wrote, "Fluency is a skill that develops with practice and observation, and permits the reader to grasp larger units and even phrases with immediate recognition" (p. 215).

Nes-Ferarra (2005) found implementing reading in a one-on-one manner improved student fluency. Her study focused on one student, Sally, who struggled with fluency, especially when reading in a whole group setting. Nes-Ferarra actively took notes and held discussions with her subject. She also provided her subject with texts that were

at her reading level to enhance fluency. While working with this student individually, Nes-Ferarra found “she made substantial progress in reading fluency over the course of the study. By the end of the study, Sally read faster, smoother, and with more phrasing and emphasis” (p. 227). The success of individualized instruction and guided reading implementation with one child can be a sign additional children may benefit as well.

Ferguson and Wilson (2009) found that “In the primary grades, guided reading increases students’ oral reading fluency, phonetic understanding, as well as their overall reading level” (p. 294). In a study conducted by McCurdy, Daly, Gartmaker, Bonfiglio, and Persampieri third grade guided reading instruction and the results of the instruction were examined. Ferguson and Wilson (2009) reported that the study took place using three different types of reading groups. The study consisted of a group that focused on small group reading instruction and rereading, which they referred to as the instructional condition. The study also consisted of a group that was given a reward when reading performance increased, and a control group that was used for comparison purposes. At the conclusion of the study, the group that demonstrated the most significant increase in fluent reading was the group that focused on small group reading instruction and rereading. Their study illustrates the growth in fluency among third grade students in the instructional condition, which mimics guided reading instruction with its use of small groups and rereading strategies.

A different study conducted by Bonfiglio, Daly, Persampieri, and Anderson involving fourth graders investigated the kind of reading instruction that would be most beneficial to students. “Their strategies included passage previewing, choral reading, error correction, and tangible rewards” (Ferguson & Wilson, 2009, p. 294).

After the implementations were in place and the study was complete, the researchers discovered that fourth graders who were part of the "small group that included passage previewing, error correction and choral reading increased their fluency (correctly read words) and decreased their errors per minute" (Ferguson & Wilson, 2009, p. 294). The strategies used in the instructional small group are also strategies used during guided reading instruction indicating the importance of guided reading instruction and its relationship to an increase in reading fluency among students.

Accuracy

Accuracy is an indicator of whether or not students are reading books at an appropriate level. Fountas and Pinnell (1996) explained, "The accuracy rate lets the teacher know whether she is selecting the right books. The books should be neither too easy nor too hard" (p. 90). The target accuracy level for students in second grade is 90% or better and the target accuracy level for students in fourth grade is 95% or better (Fountas and Pinnell, 1996). Students in either grade who obtain an accuracy level below their target level are likely reading texts that are too challenging. If the books are too difficult, student accuracy will be poor. This is indicated by Fountas and Pinnell (1996) who stated, "Stretches of accurate reading mean there are appropriate cues that allow the child to problem-solve unfamiliar aspects of the text" (p. 90). When the teacher implements guided reading groups he or she must be sure the books chosen are at an appropriate level for each of the readers in the group.

A study conducted by Nes (1997) illustrates the benefits of small group reading on student accuracy. Although Nes did not implement guided reading, she did implement paired reading which is still conducted in a small group setting with focus on increasing student fluency, accuracy,

and comprehension. The main difference between paired reading and guided reading is paired reading can be done with any book, not necessarily a leveled guided reading book. Nes reports, "All four of the less-skilled readers in the study demonstrated improvement in fluency, with individual differences in the amount of improvement; demonstrated and maintained very high accuracy percentages; and had high scores on the maze comprehension measures" (p. 41).

An additional study in the area of accuracy conducted by Mesmer (2010) had inconclusive results. Mesmer compared decodable text accuracy levels to qualitatively leveled text accuracy levels of 74 first grade students. Decodable texts are books that encourage students to apply knowledge they have about letter sounds within words and word families. Phonics is the driving emphasis behind such texts. Decodable texts focus largely on long vowel or short vowel patterns. For example, if short a is the vowel pattern in the decodable text, then each sentence would have one or more short a words in it to reiterate the short a pattern. Qualitatively leveled texts are the types of books used during guided reading instruction, which "should support readers in using multiple sources of information to recognize words" (Mesmer, 2010, p. 22). Mesmer conducted her study over the course of the school year and compared the data she collected to conclude whether or not decodable texts or qualitatively leveled texts (those used in guided reading instruction) made a difference in each student's accuracy level. Mesmer found, "The analysis of accuracy across the first-grade year showed uniform growth regardless of text and inconclusive results for texts" (2010, p. 30).

Comprehension

Comprehension is a fundamental aspect of reading. Fountas and Pinnell (2006) stated, "Comprehension is the

vital, central core of the broader and more complex ability to reason" (p. 4). Students benefit greatly from understanding what they have read. When a student has difficulty answering comprehension questions, it indicates a text is too difficult for a student and he/she is not retaining the information from the text being read. Baier (2005) conducted a study on reading comprehension and reading strategies and found, "after using reading comprehension strategy, the sixth grade students received higher test scores than before using the reading comprehension strategy" (p. 38).

Fisher (2008) noted, "The principles underpinning the practice of guided reading are concerned with the teaching of comprehension strategies and the development of critical literacy" (p. 20). Guided reading instruction provides students with such strategies when it comes to comprehension as well as providing students with a comfortable place to participate and answer comprehension questions. Fisher (2008) wrote, "A guided reading group offers a supportive environment in which to promote such active participation in meaning making" (p. 20). In this way, students have a better chance of understanding texts they read. Iaquina (2006) took the importance of guided reading instruction and its impact on students' comprehension into consideration when she wrote,

A framework for guided reading lessons (Fountas & Pinnell, 2001) provides for different kinds of learning in different ways; each element has a function related to students' ability to construct meaning. These components work together to form a unified whole and create a solid base from which to build comprehension. (p. 417)

Both fluency and accuracy can impact comprehension in reading. A study conducted by Fountas and Pinnell (1996) “of over one thousand fourth graders’ oral reading fluency found that rate, fluency, and accuracy were all highly related to comprehension” (p. 150). When a student’s reading is not fluent and accurate, it is more difficult for the student to comprehend what he/she has read due to the amount of time taken to decode words and complete the reading selection.

Fluency, accuracy, and comprehension are all aspects associated with guided reading instruction. The purpose of including and examining each of these aspects in guided reading is to “meet the varying instructional needs of all the students in the classroom . . . to teach students to read increasingly difficult texts with understanding and fluency; to construct meaning while using problem solving strategies . . . , and understand concepts or ideas not previously encountered” (Iaquinta, 2006, p. 414). Implementing a program such as guided reading provides students with focused instruction at their specified level increasing each student’s overall reading ability.

Purpose of the Study

The purpose of this study was to determine the amount of student growth in the areas of fluency, accuracy, and comprehension through the use of guided reading instruction. Understanding that the instructional method being used increases student’s fluency, accuracy, and comprehension makes clear the benefits of guided reading instruction for teachers to use within the classroom. Fluency, accuracy, and comprehension levels contribute to student reading success as a whole, but often growth in student reading levels is the only indicator examined to determine growth in reading. Recognizing growth in the areas of student levels of fluency,

accuracy, and comprehension is important to ensure students are making total gains in reading.

Methodology

Each variable was addressed separately to determine if there was an increase, a decrease, or if student levels stayed the same in the areas of fluency, accuracy, and comprehension. The study was completed using the Fountas and Pinnell Guided Reading System in one second grade and one fourth grade classroom. Notes taken about each student's levels of fluency, accuracy, and comprehension were recorded at the beginning and end of the study. Examining research which has already been conducted in each of these areas helped inform this study.

Participants

The subjects for this study were 24 second grade students between the ages of seven and eight and 16 fourth grade students between the ages of nine and ten. There were 13 second grade girls, 8 fourth grade girls, 11 second grade boys, and 8 fourth grade boys yielding a total of 21 girls and 19 boys, or 40 subjects total assessed for this study. Second grade students were assessed in their second grade classroom by their teacher, and fourth grade students were assessed in their fourth grade classroom by their teacher. Parent permission was obtained for students to participate in the study. Parents were assured their child could not be identified in any way. All 24 second grade students returned their signed permission form and 16 out of 20 fourth grade students returned their signed permission form. Students who did not return a student permission form were not included in this study.

Research Design

This research followed a paired study design where student levels of fluency, accuracy, and comprehension were examined. The goal of the research was to find a relationship between student levels of fluency, accuracy, and comprehension prior to the implementation of guided reading instruction to student levels after the implementation had been put into place. Change among students' fluency, accuracy, and comprehension scores were anticipated after the Fountas and Pinnell Guided Reading System was utilized. In order to determine if the implementation was successful, student levels from the first guided reading assessment were compared to those gathered after the final guided reading assessment was administered.

Instrumentation

A running record was used to gather data on student fluency, accuracy, and comprehension in reading. The running record came from the Fountas and Pinnell Guided Reading System. The assessment was administered to each student individually in the same room as, but at a table away from their classmates who were working quietly at their desks. The assessment began with the teacher introducing a book and proceeded with the student reading the book. While the student read aloud to the teacher, the teacher marked errors and self-corrections in the provided columns on the running record to later determine the student's reading accuracy. All students were aware the teacher would take notes on their reading performance and were neither bothered nor distracted by this.

On the running record, the teacher also determined the student's fluency on a 0 to 3 scale. On the fluency scale, a student who scored zero typically read word-by-word with

awkward pausing and no expression; a student who scored a one read in two-word phrases slowly, but not smoothly; a two was given to a student who read mostly smoothly and with expression in three- or four-word groups; and a three was given when the student read smoothly with expression in large meaningful phrases and at an appropriate rate.

The test concluded with a series of comprehension questions for the student to answer in order to check his/her understanding of the text just read. Student responses were scored on a 0 to 7 scale. The scoring for this portion of the test was somewhat subjective. The running record listed the questions asked and also provided examples of acceptable answers to guide the teacher's scoring decision. In the end, the score was decided upon at the teacher's discretion. Students who earned zero to three points demonstrated unsatisfactory comprehension, a four showed limited comprehension, a five showed satisfactory comprehension, and a six or seven indicated the student had excellent comprehension.

Data Collection Procedures

The test was implemented during small group reading time in the second grade and fourth grade classrooms during the months of March and June. Administering the tests in March and June allowed enough time between tests to be able to distinguish if the implementation was successful. Both the second and fourth grade classrooms utilized in the study were chosen because the teachers in each classroom were familiar with the procedure to correctly implement the Fountas and Pinnell Guided Reading System.

Students were called to the back table in each of their classrooms to work one-on-one with the classroom teacher where the reading test was administered. Students in second grade read with their second grade teacher and students in

fourth grade read with their fourth grade teacher. Students were asked to read aloud to the teacher and then answer a series of questions based on what they read. Test time varied from student to student in a range from 15 to 30 minutes, but there was no time limit. Each classroom teacher kept track of student levels of fluency, accuracy, and comprehension on a table designed for this study. The researcher gathered test results after initial student testing was completed and after students were retested in order to compare the two sets of data to one another.

Data Analysis

The test data was analyzed using a table to illustrate growth, non-growth, or if students stayed the same in the areas of fluency, accuracy, and comprehension. The results were compared to original student levels of fluency, accuracy, and comprehension which were obtained prior to the implementation of the Fountas and Pinnell Guided Reading System.

Results

Fluency

The first research question in this study addressed the effect of guided reading instruction on fluency. Fluency was assessed using the Fountas and Pinnell Guided Reading System. The students read a passage aloud and notes were taken on each individual's fluency level. Fluency was scored on a 0 to 3 scale with a score of zero indicating little to no fluency and a score of three indicating the student was fluent.

Table 1 illustrates the results gathered while assessing student fluency in the form of the number and percentage of students who increased, decreased, or stayed the same.

Table 1
Student Fluency

Fluency Level	Number of Students (N=40)	Percentage of Students
Increased	12	30%
Stayed the Same	25	63%
Decreased	3	7%

The table illustrating student fluency shows there was little decrease in this area. About one-third of students showed an increase in fluency, and more than half of the students who participated in this study neither increased nor decreased in the area of fluency.

Accuracy

The second research question in this study addressed the effect of guided reading on accuracy. Students were assessed while reading a designated passage from the Fountas and Pinnell Guided Reading System. Accuracy was determined by the number of errors a student made while reading. The formula used to yield a percentage of accuracy was $[(\text{number of errors})/(\text{number of words})]*100$.

Table 2 illustrates the results gathered while assessing student accuracy in the form of the number and percentage of students who increased, decreased, or stayed the same.

Table 2
Student Accuracy

Accuracy Level	Number of Students (N=40)	Percentage of Students
Increased	20	50%
Stayed the Same	16	40%
Decreased	4	10%

As with fluency, the data gathered in the area of accuracy showed little decrease. Half of the students showed an overall increase in accuracy. A little less than half of the students tested in this area showed neither an increase nor a decrease in accuracy. Instead, they stayed the same.

Comprehension

The third research question in this study addressed the effect of guided reading on comprehension. Students were assessed on comprehension after they read a designated passage aloud. Questions were based on the reading passage. Student responses were scored on a 0 to 7 scale with a score of zero indicating little to no comprehension and a score of seven indicating the student had outstanding comprehension. More specifically, students who earned zero to three points had unsatisfactory comprehension, a four demonstrated limited comprehension, a five showed satisfactory comprehension, and a six or seven indicated the student had excellent comprehension.

Table 3 illustrates the results gathered while assessing student comprehension in the form of the number and percentage of students who increased, decreased, or stayed the same.

Table 3
Student Comprehension

Comprehension Level	Number of Students (N=40)	Percentage of Students
Increased	19	48%
Stayed the Same	12	30%
Decreased	9	22%

Nearly 50% of students demonstrated an increase in comprehension, making it the most common result of this study. Almost one-third of students showed neither an increase nor a decrease in comprehension while reading and about one-fifth of students showed a decrease.

Discussion

The underlying theme of each research question addressed by this study was to determine if the implementation of guided reading instruction would produce readers who became more fluent, more accurate, and who developed better comprehension skills throughout the process.

The basic design for this study was descriptive and an experimental methodology was used to gather data about each of the three variables. The subjects for this study were 24 second graders and 16 fourth graders. Fluency, accuracy, and comprehension were chosen as variables since they are crucial components which contribute to the development of young readers. Each variable was examined individually to determine if there was an increase, decrease, or if students stayed the same in any of the tested areas. Performing the research in this way provided an in depth insight into each variable.

A test from the Fountas and Pinnell Guided Reading System was used to gather data on student fluency, accuracy, and comprehension in reading. The test was administered to each student individually. The test was administered two times per student, once in March at the beginning of the study and once in June at the end of the study to determine the results of the implementation. Students read a selection aloud. Notes were taken on fluency to determine where each student fell on a 0 to 3 scale. Errors and self-corrections were tallied to later determine accuracy. Finally, comprehension

questions were asked after the student read aloud. Each question was scored using a 0 to 7 scale depending on the detail and correctness of each response. The results were used to identify an increase or decrease in fluency, accuracy, and comprehension, or if students stayed the same and showed neither an increase nor a decrease in these areas.

Limitations of the Study

There were three limitations involved with this study. The first was dependent on parents signing and returning student permission forms allowing students to participate in this study. The second was a procedural weakness. The test was implemented by two different teachers within their classrooms. Both received the same training, but due to the somewhat subjective scoring for the comprehension portion of the test, overall comprehension scores may be skewed based on each individual teacher's perception of student answers. The final limitation focuses on the fact that the second guided reading assessment was more difficult than the first as students reading levels increased with the implementation.

Implications

The results of this study indicated the implementation of guided reading instruction was beneficial to students in this area when placing students into three categories of increasing, decreasing, or staying the same in the area of fluency. One-third of students showed an increase in fluency. However, this indicates almost two-thirds of students did not show an increase in fluency with this implementation when combining the number of students who stayed the same with the number of students who decreased. The fact that more than half of the students stayed the same in the area of fluency even though the texts they were tested on were more

difficult the second time indicates that the implementation of guided reading was beneficial. This coincides with the study conducted by Nes-Ferarra (2005) who found working with students individually gave them more confidence and allowed them to read more fluently.

The study indicated 50% of students showed an increase in accuracy. There was little decrease (10%) in student accuracy scores. The remaining 40% of student scores neither increased nor decreased. Therefore, almost all students (90%) either increased or maintained their scores rather than earning a decreased accuracy score. Combining the number of students who increased in accuracy or stayed the same would replicate what Nes (1997) found in her study of paired reading. The most common trend in her study was student accuracy either increased or stayed the same.

Student levels of comprehension did increase with the implementation as nearly 50% of students demonstrated an increase in scores. The results of this study correlate with the results found by Baier (2005) in which students performed better when asked to answer comprehension questions after a program supporting them in doing so was implemented. Given a greater number of students increased, implementing guided reading was successful in the area of comprehension.

Conclusion

Implementing guided reading instruction results in students who are more efficient and capable readers. The following conclusions can be made based on the results of this study: Fluency levels may have been affected by the increased difficulty of the second test administered. Tests are given at a higher level to determine if students are ready to change reading levels. Given the nature of the text and the more difficult words, this may have affected results. Examining accuracy scores shows exactly half of the students

in the study demonstrated increased levels, indicating overall that the implementation of guided reading was positive and beneficial to students. Providing students with texts to read at their individual level proved to be a positive implementation in the area of comprehension. Nearly half of the students tested showed an increase in this area illustrating that guided reading had a positive impact on their comprehension. Testing whether or not student exposure to reading has an effect on fluency, accuracy, and comprehension would be beneficial. Determining how much time students spend reading outside of school may be an indicator of their successes or struggles with reading in school.

The tests utilized in this study were administered over the course of a short time frame. Had student levels of fluency, accuracy, and comprehension been looked at from the beginning of the year to the end of the year, the results may have been quite different. Additionally, taking student guided reading levels into consideration as well as their levels of fluency, accuracy, and comprehension would more effectively illustrate the true impact of guided reading on student reading skills. If student reading levels are increasing, then their skills are increasing as well.

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Parent Peer Support: Impact on Children with Mental Illness

Deb Ramacher

Undergraduate Student, Human Development and Family
Studies

Abstract

Parenting can be a daunting endeavor. Parenting a child with special needs can be even more challenging (Ireys, Chernoff, Stein, DeVet, & Silver, 2001). This nonrandom pilot study investigated the impact of parent peer support on children with mental illness. It was hypothesized that parents would report improvements in their own coping skills, emotional health and confidence, and improvement in their children's behavior as a result of the parent being involved in parent peer support. An online survey was administered to 35 parents from a Wisconsin nonprofit advocacy agency. Survey data was statistically analyzed using frequencies, mean comparisons, correlations and a reliability analysis. As hypothesized, parents reported improvements in their coping skills, emotional health and confidence. However, they did not report improvements in their children. Implications for practitioners would be that parents need help recognizing indications of improvement in their children. Future research would benefit from a large, randomized national sample.

Keywords: peer support, parent peer support, parent support, child mental health

Parenting can be a daunting endeavor. Parenting a child with special needs, such as mental illness, can be even more daunting (Ireys, Chernoff, Stein, DeVet, & Silver, 2001). Parents who have children with mental illness and emotional/behavioral disorders often experience higher levels of stress and anxiety than do parents of children without these issues (Scharer, 2005; Ireys et. al, 2001). The term "emotional/behavioral disorders" is typically used in the special education community, and describes a child with behavior that is significantly different from others and adversely affects the child in one of several areas including personal relationships, academic progress, and/or daily living activities. The behaviors are severe, chronic and frequent. The behaviors occur at school and at least one other setting, such as home or community (Wisconsin Department of Public Instruction EBD Eligibility Checklist, 2009). There is general agreement that the mental and emotional health of the parent affects the health of the child. While several studies have evaluated the impact of parent peer support on parents of children with mental illness or special needs, there has not been as much research on the potential impact of parent peer support on the children. Silver, Ireys, Bauman, and Stein (1997) described parent peer support as support that is provided by parents who have experience with similar issues as the parents they assist and who have been trained in mentoring and communication skills. Using an online survey of parents working with a Wisconsin nonprofit advocacy agency, the present study evaluated the impact of parent peer support on children and their families.

Literature Review

Although it is not quite clear in what ways and how much parent peer support impacts parents, there is little doubt that parent peer support does have an effect on caregivers. Some

of the existing literature also discusses the possibility of parent peer support having an impact on children as well but focus of studies remain largely on parents and not on the outcomes for children. Nevertheless, in general, most studies on the topic of parent peer support and children with mental illnesses agree that parents' mental health and emotional state have a direct impact on the family and, particularly, the children (Davis-Groves, Barfield, McCave, & Corrigan, 2007; Scharer, 2005; Ireys et. al, 2001; Silver et. al, 1997; Hartman, Radin, & McConnell, 1992).

In their ongoing study of parent support and children with mental illness, Davis-Groves et al. (2007) find that parent support offers some important benefits to the parents, the children and the entire family. Some key benefits include better outcomes for the children, improved identification of best services for families, improved parenting abilities, and increased efficiency of community-based services.

Scharer (2005) examined the use of the Internet as a tool to provide social support to parents of emotionally disturbed children. Her study cites research supporting the need for and value of peer support for parents of children with emotional disorders. According to Scharer, parents of children with emotional disorders reported higher levels of stress than parents of children without emotional disorders. A direct relationship was demonstrated between social support and maternal mental health. Scharer proposes the relationship between lower social support, increased illness, and increased levels of stress. In addition, her study addresses the problem of barriers that parents of children with emotional disorders may encounter in creating and maintaining social support networks. Some of these challenges include lack of resources, geographical isolation (rural areas), and anxiety over leaving children with challenging behaviors with babysitters. Another reason discussed by Scharer is the increased availability and

use of the Internet among all backgrounds and socioeconomic levels; the Internet thus can be a valuable tool for parents to develop social support networks.

Ireys et al. (2001) conducted a study that examines the outcomes of three different family support networks over the course of ten years (2001). The study focused on parents of children with chronic health issues. The three networks were composed as follows: Network 1 included 365 parents of children with a wide variety of conditions, Network 2 included 53 parents of children with arthritis, and Network 3 was composed of 193 parents of children with diabetes, cystic fibrosis, sickle cell anemia, and moderate to severe asthma. In all of the studies, parents of children with similar issues were hired and trained to serve as support partners. The support partners had children who were young adults (or older). The intention was to convey to younger parents the message that the support partners had "been there, had survived and are still going" (Ireys et al., 2001). The support partners were to connect with their assigned parents via telephone every two weeks, meet with them in person at least six times during the program, and attend three special events. While all three of the groups were quite consistent structure and procedures, they did not all show statistically significant results. The primary effect noted by Ireys et al. was a decrease in anxiety among the parents. Due to the study's design, Ireys et al. were unable to address whether or not the improvement in anxiety level had any direct effects on the family environment or whether the decrease in anxiety was clinically significant.

Silver et al. (1997) studied the psychological outcomes in mothers involved in a specific parent support program, The Parent-To-Parent Network (PTPN). The PTPN is a community-based support program for mothers of children, ages 5 to 8, with a variety of health conditions. Silvers et

al. referred to previous findings that mothers of children with chronic health conditions are at increased risk for psychological distress and pointed at the relationship between maternal mental health and child mental health. Based on previous studies, Silver et al. designed their study to focus on three specific issues: overall program effects, whether or not some subgroups benefited more than others, and the impact on children (as observed by changes in the children's behavior and psychological adjustment). Silver et al.'s participants were recruited from two large urban medical centers that served a predominantly low-income, minority population. A total of 365 mothers were enrolled in the study, with a 94% participant retention rate. Participants were connected to a trained parent, and they were expected to have phone contact at least every other week, meet in person six times during the program, and attend three scheduled activities. The results of the study show a decrease in maternal anxiety, as well as maternal anger. There was no discussion of whether or not there was any impact on the children.

Hartman et al. (1992) examined the challenges faced by families of children with chronic illness and disabilities. In their work, they discuss the fact that these families often have to understand complex medical information, make difficult medical decisions, and at the same time try to balance those tasks with the day-to-day business of a family. Hartman et al. also talk about the importance of social support and the relationship that social support has to improved health and tolerance for stress. Hartman et al. focused on a specific parent support program, the Family Support Network of Michigan (FSN). Hartman et al. detailed the training and responsibilities of the support parents. They propose that parent peer support is an effective coping tool for parents of children with special needs, since shared experiences can help create an atmosphere of trust, allowing parents to discuss

their concerns and vent their feelings. In fact, support offered by support parents helps parents become more confident in their abilities to manage the many challenges that are part of parenting children with special needs (Hartman et al., 1992).

While current literature demonstrates the effectiveness of parent peer support for parents in terms of decreased anxiety (Ireys et al., 2001; Silver et al., 1997), increased confidence in parenting skills (Hartman et al., 1992), and ability to manage and tolerate stress (Scharer, 2005), there is little specific information on the impact of parent peer support on children. Several of the aforementioned studies imply that since a parent's mental health has a direct influence on a child's mental health, parent peer support, with its positive impact on parent's mental health, will also have a positive impact on children's mental health. The present study focused on the impact of parent peer support on children.

Theoretical Framework

This study used Systems Theory as the theoretical framework. Systems Theory states that family members are interdependent upon one another; no family member functions in isolation from the others (DeGenova & Rice, 2002). Each family member impacts all of the other family members. If one family member is struggling with mental illness, for example, Systems Theory suggests that this family member's struggles will have direct effects on all of the other family members.

This theory directly supports the claim of this study that successful treatment of children with mental illness requires the involvement of the entire family, particularly the support of the parents. Systems Theory proposes that within families there is not only the family system as a whole but also subsystems within the family. Based on the Systems Theory, I hypothesized that working with the parent of a child with

mental illness, and providing them direct support, would directly impact the child in a positive way.

Purpose Statement

The purpose of this study was threefold: (1) to examine the impact of parent peer support on children with mental illness and/or emotional/behavioral disorders with a sample of parents working with a nonprofit advocacy agency in Wisconsin, (2) to develop a reliable online survey instrument that would measure the impact of parent peer support on the children from the perspective of the parents, and (3) to bring increased awareness of the value of parent peer support to mental health and human services professionals. The study also aims to inform policy-makers of the importance of parent peer support as they make decisions in regard to the funding of public mental health services.

The central research question in this study was "What is the impact of parent peer support on children with mental illness and emotional/behavioral disorders?" I predicted that there would be improvement in parents' coping skills, emotional health and confidence, and improvement in the children's behavior. The literature strongly supports the belief that parents gain confidence and coping ability with the use of parent peer support. There was some discussion in literature about improvement in children's behavior and based on the Systems Theory framework, one can expect that if parents do better, children will do better as well.

Method

Participants

The participants of this study were 35 parents of children with mental illness and/or emotional/behavioral disorders who were using or had used the parent peer support services

of a Wisconsin nonprofit advocacy agency. Initial online survey invitations were sent to 220 parents in the agency's database. Of those, 48 began the online survey, with 35 completing it. There were 32 female participants and 3 male participants. Of these, four were between the ages of 26 and 35, seventeen were between the ages of 36 and 49, and fourteen were 50 or older. There were 10 participants who had one child, 12 who had two children, 6 who had three children, 3 who had four children, 3 who had five or more children, and 1 participant did not report the number of children. Twenty-one participants had one child with a mental illness and/or emotional/behavioral disability. Fourteen participants had two children with a mental illness and/or emotional/behavioral disability.

Research Design

The purpose of this survey research was to be able to generalize to a similar, larger population to make some inferences about characteristics, attitudes, or behaviors of this population of parents of children with mental illness and/or emotional/behavioral disorders, and the children, themselves (Babbie, 1990). The study research design was a cross-sectional survey, with data collected from a cross-section of parents of children with mental illness and/or emotional/behavioral disorders, captured at one point in time. The form of data collection was a self-administered online questionnaire. The sample population consisted of parents who either currently worked with a peer support person (family advocate) with a Wisconsin nonprofit advocacy agency or who had done so in the past. The sampling design used in this research was both snowball and purposive type nonrandom probability. The snowball type was utilized because the sampling used a network to which I had access and purposive because the agency from

which the participants were drawn serves parents of children with mental illness and emotional/behavioral disorders, the study's target population. Randomization was not used because of sample size and the use of an online survey. The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

In order to evaluate the impact of parent peer support on children with mental illness and/or emotional behavioral disorder, an online survey was designed. The survey included five demographic questions relating to gender, age of participant, number of children, age of children, and number of children with mental illness and/or emotional/behavioral disorder. Following the demographic questions, there were eight close-ended statements based on a five-point Likert scale which measured the intensity of respondents' agreement with the statement, ranging from one (*strongly disagree*) to five (*strongly agree*). There was also one open-ended question inviting participants to share any other information they felt was relevant. Survey questions were informed by literature and theory in relation to parent peer support and Family Systems Theory.

The survey instrument had both face validity and content validity. Face validity refers to the instrument questions having a logical connection to the concept and research question. Because the statements in the survey were literature-based, it was determined that they clearly related to the impact of parent peer support on children with mental illness and/or emotional/behavioral disability. Content validity refers to the instrument statements' coverage of the full range of concepts under the larger topic. The statements covered a wide range of areas in which parent peer support could have an impact, including parents' coping skills and behavior management skills, as well as children's school

attendance and grades. The survey was piloted to two parents to increase validity; their feedback was used to ensure clarity of the survey questions.

Procedure

E-mail invitations to take the survey were sent out by the executive director of the nonprofit agency to 234 e-mail addresses in the agency's database. Fourteen e-mails were undeliverable. Thirty-five surveys were completed and returned.

Data Analysis Plan

The data was first cleaned and checked for any missing data. The cleaned surveys were then coded using acronyms for each variable. As there was no group comparison on this survey, all statements were dependent variables. Each dependent variable was given an acronym name: *After working with a family advocate, I am better able to cope with stress* (COP); *After working with a family advocate, I am more knowledgeable about resources for my child and my family* (KNO); *After working with a family advocate, I am more able to effectively manage my child's behavior* (MAN); *After working with a family advocate, I am more comfortable advocating for my child's needs in school and with professionals* (ADV); *My child has fewer absences and/or less tardiness after my work with a family advocate* (LAT); *My child is more able to manage transitions without acting out or becoming upset, after my work with a support parent* (TRA); *My child has had less interaction with law enforcement, after my work with a family advocate* (LAW); *My child's grades have improved, after my work with a family advocate* (GRA); *There is less arguing in my home since my work with a family advocate* (ARG).

To analyze the data, the data-analyzing computer program called the *Statistical Package for the Social Sciences* (SPSS) was used. The individual was used as the level of analysis. The statistical analyses done were frequencies, mean comparisons, and correlations, as well as reliability analysis, the Cronbach's Alpha.

Results

There were 220 online surveys distributed, with a return rate of 16%. All variables were subjected to frequency distribution analysis. Results indicated that there was no missing data. However, the demographic variable *Ages of Children* (AGC) was omitted from the results as the online survey did not allow for more than one answer, so the data was not valid.

The majority of respondents agreed and/or strongly agreed that after using a family advocate they were better able to cope, had more knowledge of resources, were better able to manage their child's behavior, and were more effective advocates for their children. In regard to whether their children had fewer absences or incidences of tardiness, were better able to manage transitions, had less contact with law enforcement, or had improved grades after their parents had with a family advocate, the majority of respondents were undecided or neutral.

In analyzing the correlations data, there appears to be significant relationships between Coping and Knowledge, Coping and Managing Behavior, Coping and Advocating, Coping and Grades, Knowledge and Advocacy, Managing Behavior and Less Absences/Tardiness, as well as less Law Enforcement Contact and Grades.

Table 1
Frequency Distribution

Variable	SD	D	U	A	SA	Total
COP	5.7%	2.9%	25.7%	51.4%	14.3%	100.0%
KNO	5.7%	5.7%	11.4%	54.3%	22.9%	100.0%
MAN	8.6%	5.7%	34.3%	45.7%	5.7%	100.0%
ADV	5.7%	2.9%	22.9%	48.6%	20.0%	100.0%
LAT	11.4%	20.0%	45.7%	17.1%	5.7%	100.0%
TRA	8.6%	11.4%	45.7%	34.3%	0.0%	100.0%
LAW	2.9%	5.7%	68.6%	14.3%	8.6%	100.0%
ARG	8.6%	11.4%	54.3%	22.9%	2.9%	100.0%

Note. (COP)=After working with a family advocate, I am better able to cope with stress; (KNO)=After working with a family advocate, I am more knowledgeable about resources for my child and my family; (MAN)=After working with a family advocate, I am more able to effectively manage my child's behavior; (ADV)=After working with a family advocate, I am more comfortable advocating for my child's needs in school and with professionals; (LAT)=My child has fewer absences and/or less tardiness, after my work with a family advocate; (TRA)=My child is more able to manage transitions without acting out or becoming upset, after my work with a family advocate; (LAW)=My child has had less interaction with law enforcement, after my work with a family advocate; (ARG)=My child's grades have improved, after my work with a family advocate.

Table 2
Compare Means

	COP	KNO	MAN	ADV	LAT	TRA	LAW	ARG
Mean:	3.66	3.83	3.34	3.74	2.86	3.06	3.20	3.00
SD:	0.97	1.04	1.00	1.01	1.03	0.91	0.80	0.91
Range:	4.00	4.00	4.00	4.00	4.00	3.00	4.00	4.00

Note. (COP)=After working with a family advocate, I am better able to cope with stress; (KNO)=After working with a family advocate, I am more knowledgeable about resources for my child and my family; (MAN)=After working with a family advocate, I am more able to effectively manage my child's behavior; (ADV)=After working with a family advocate, I am more comfortable advocating for my child's needs in school and with professionals; (LAT)=My child has fewer absences and/or less tardiness, after my work with a family advocate; (TRA)=My child is more able to manage transitions without acting out or becoming upset, after my work with a family advocate; (LAW)=My child has had less interaction with law enforcement, after my work with a family advocate; (ARG)=My child's grades have improved, after my work with a family advocate.

Table 3
Pearson Correlation Matrix

Variable	COP	KNO	MAN	ADV	LAT	TRA	LAW	ARG
COP		.523**	.582**	.629**				.502**
KNO				.460**				
MAN					.477**			
LAW								.488**

Note. (COP)=After working with a family advocate, I am better able to cope with stress; (KNO) =After working with a family advocate, I am more knowledgeable about resources for my child and my family; (MAN) =After working with a family advocate, I am more able to effectively manage my child's behavior; (ADV) =After working with a family advocate, I am more comfortable advocating for my child's needs in school and with professionals; (LAT) = My child has fewer absences and/or less tardiness, after my work with a family advocate; (TRA)=My child is more able to manage transitions without acting out or becoming upset, after my work with a family advocate; (LAW)=My child has had less interaction with law enforcement, after my work with a family advocate; (ARG)=My child's grades have improved, after my work with a family advocate.

~N=35; **Correlation is significant at the $p < 0.01$ (two-tailed)

A reliability analysis was run to determine whether the eight variables (COP, KNO, MAN, ADV, LAT, TRA, LAW, & ARG) were a reliable index to measure the major concept, the impact of parent peer support on children with mental illness. Cronbach's Alpha is a measure of reliability and in this analysis was 0.831. This value indicates that the survey questions are a reliable measure of the major concept.

Qualitative comments were received at the end of a number of our surveys. These comments will be analyzed in the discussion section.

Discussion

The hypothesis that parents would report improvements in their own coping skills, emotional health and confidence, and improvement in their children's behavior as a result of the parent being involved in parent peer support was

supported by the data; however, the results were somewhat mixed. Frequency results data indicate strong support for the portion of the hypothesis that states that parents would experience improvement in coping skills, emotional health, and confidence. The data for the second part of the hypothesis (i.e., that there would be improvement in children's behavior) indicates, for the most part, that parents were undecided.

Statistically significant correlations ($p < 0.01$ level) were found between several of the variables. There are significant correlations between all of the variables relating to the parents: ability to cope with stress, knowledge of available resources, ability to effectively manage child's behavior and ability to be a more effective advocate for their child. These findings are also supported by previous studies, such as Scharer (2005), Ireys et al. (2001), and Silver et al. (1997) who reported that parents experienced decreased anxiety and were better able to handle stress when provided parent peer support either in formal support groups or with one-on-one parent peer support. Hartman et al. (1992) concluded that parent peer support increases parents' ability to handle the many challenges of raising children with special needs and makes them more confident in their parenting skills. Additionally, correlations were found between two of the variables relating to the children and to the parents. There is a correlation between parents' ability to effectively manage their children's behavior and children experiencing less frequent tardiness or absences. There is also a correlation between parents' ability to cope with stress and children improving their grades. Davis-Groves et al. (2007) reported that children whose parents received parent support services had better outcomes in term of academic performance and school attendance.

The frequency distribution data demonstrates strong support for the hypothesis that parents would experience

improvements in several areas, but there is less support in regard to the areas of impact on the children. A majority of parents agreed or strongly agreed that they are better able to cope with stress after working with a family advocate. Scharer (2005), Ireys et al. (2001), and Silver et al. (1997) all reported parents experiencing an improvement in their ability to cope with stress but did not indicate whether or not this had an impact on the children.

A majority of parents agreed or strongly agreed that they were more knowledgeable about resources for their child and their family after working with a family advocate. This result is not surprising because family advocates have first-hand experience in dealing with the various agencies and systems available for children with mental illness, and their families. Helping parents to learn more about available resources and systems is often a key component to the family advocate's responsibilities (Davis-Groves et al., 2007).

A majority of parents agreed or strongly agreed that they were more able to effectively manage their children's behavior. The findings of Davis-Groves et al. (2007) are very similar; they reported that parents who worked with family advocates showed improvements in their ability to manage their children's behavior and were more confident in their parenting skills.

In the area of confidence in advocating for their children's needs in school and with professionals, the majority of parents, again, agreed or strongly agreed that this had been a benefit of their work with a family advocate. According to Hartman et al. (1992), parent peer support helps parents to "develop skills to participate fully on a peer basis in decisions regarding their families' unique needs" (p. 56). Interestingly, the majority of parents responded "undecided" on all four statements regarding their children's behavior. Approximately one-half of the respondents were undecided

in regard to improvement for their children in the areas of attendance, ability to manage transitions, and grades. Over two-thirds of the respondents were undecided about improvement for their children with regard to contact with law enforcement. In all four areas, Davis-Groves et al. (2007) noted improvement for children whose parents had received parent peer support. One reason for the current findings could be that it is difficult for parents to identify improvements in their children's behavior because they have not been looking for markers or milestones to indicate improvement. Perhaps because they are not actively trying to observe specific improvements, it is difficult for them to identify positive changes, particularly if these are very gradual. Another possibility could be that there is a need for more questions on the survey that classify a child's behaviors more specifically. For example, if a child has not had previous contact with law enforcement, there would not be improvement in that area; yet, to disagree may indicate that there has been a problem that did not improve. There should first be a question asking if the child has had contact with law enforcement. At that point, if the answer is yes, the question about improvement is asked. Although parents did not identify improvements in their children's behavior when directly questioned about a specific behavior, a correlation exists between parents' improved behavior management skills and their children's reduction in absences. Again, this indicates that parents may have difficulty identifying improvements in their children.

Qualitative Analysis

One central theme emerged from the qualitative comments. Parents found that having support in meetings and having support when working with professionals gave them confidence and empowered them to advocate more effectively for their children. This theme becomes apparent through comments such as "Advocates are very important

to families. Dealing with the school is a struggle—even when things are going good at home, things seem to be ‘out of control’ at school. It’s much easier to attend a school meeting with support.” Another participant commented, “By being in touch with [the agency] and having an advocate, the school has been nudged into considering different ideas that are more proactive. It helps to have outside support for what I know is helpful for my child.” Hartman et al. (1992) addressed similar findings in their study and assert that parent peer support helps parents develop skills that make them effective advocates with professionals.

Limitations

The major limitation to this study was the small sample size and the nonrandom design. Because Wisconsin’s population is relatively homogenous, there was also a lack of diversity among the respondents. Another limitation may have been the use of an online survey. This method may have contributed to possible hidden biases in the survey results. Parents would have needed to have computer and e-mail access to complete the survey. Parents with lower socioeconomic status, or limited education, may have inadvertently been excluded from participation.

Implications for Practitioners

The data overwhelmingly demonstrates that parents of children with mental illness benefit from parent peer support; yet, few of them recognized improvements in their children, even though there is a correlation between parent impact and impact on children. The data shows significant correlations between parents having improved behavior management skills and children having less truancy issues. There is also a significant correlation between parents reporting improved coping skills and children earning better grades. This lack of

recognition, on the parents' part, may indicate that the issue is related to parents not recognizing markers or milestones that would indicate improvement. It may be helpful for practitioners to educate parents about how to measure improvements in their children's behavior. Often when practitioners start working with a child, they administer evaluations to assess the current level of functioning. It would be useful to evaluate the child again, later in the treatment process, to measure and demonstrate any improvements that may have occurred.

Implications for Future Research

There are several suggestions for future research. First, future research should include a random, large sample in order to generalize the findings nationwide. Using a variety of means to deliver the survey would provide more people from diverse backgrounds to participate. Additionally, providing some sort of incentive for completing the survey may increase the response rate.

If the same survey would be used again, some additional statements and/or questions should be added. For example, as mentioned earlier, it would be helpful to ask if the child has had contact with law enforcement before asking parents to report whether or not there is less contact with law enforcement. It may also be useful to further evaluate the correlation between parents' improved coping skills and children's better grades, as well as the correlation between parents' improved behavior management skills and children's improvement in tardiness and absences.

Another suggestion is the use of several different study designs. For example, it would be interesting to do a comparison between a group of parents who do not use parent peer support services and a group of parents who do use

those services. Similarly, a longitudinal study could provide further insights, beginning with parents who are not using parent peer support services, adding services, and following participants over time to evaluate the long-term impact of those services. Conducting a study using the child's behavior evaluations and assessments utilized by practitioners (both before and after using a parent peer advocate) may be another method to obtain valuable information about the impact of parent peer support on children. Finally, it would certainly be useful to do qualitative research with both parents and children. Parents, in sharing their lived experiences, could add context and depth to the study, and may provide ideas for additional future research. Likewise, it would be interesting to interview the children to determine if they believe their behavior has improved since their parents began working with a family advocate, and to compare their answers with those of their parents.

Conclusion

As in previous studies, the study at hand clearly demonstrates that parent peer support benefits parents of children with mental illness. Parents can develop, or improve, their skills in a variety of areas including coping skills, behavior management, advocacy, and accessing resources. Parenting a mentally ill child can be an isolating experience, and connecting to a person who truly understands can make the journey a little less lonely. Parent peer support can be a powerful, cost-effective means for helping parents meet the daunting challenges of raising a child with special needs such as mental illness. In a difficult economy, social services are often some of the first government services to be cut or reduced, while at the same time the need for those services increases. In Wisconsin, for example, there are very few

family advocates who work with families of children who have mental illnesses; the low number may be due to a lack of funding. Research can provide evidence of the value of these services, and may help to increase support for using them.

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The Impact of Hmong Women's Gender Role Endorsement on Decision-Making

Kao Lee Yang

Undergraduate Student, Psychology

Abstract

Previous research has shown that Hmong women are taking on more modern gender role views as opposed to keeping their traditional, patriarchal views of gender roles. This research investigates Hmong women's endorsement of modern and traditional gender roles and how it affects their decision in a decision-making scenario with a Hmong man. There were a total of 32 Hmong women participants. Each participant completed a Hypergender Ideology Scale, which measured their adherence to traditional gender roles, followed by instructions to read a scenario involving a man and a woman making decisions. Each decision that was made in the scenarios represented the gender role view (modern vs. traditional) of the woman. An average Hypergender score revealed that participants held modern gender role views. However, correlations of the Hypergender score were significant with some chores from the traditional scenario but not the modern scenario. These results suggest that participants held modern gender role beliefs but still endorsed traditional gender roles. Hmong women grow up in a culture that holds traditional gender role beliefs and where men are the main family decision-makers. As a result, Hmong women rarely find themselves in positions where they can make a decision that will impact their family. They may have felt conflicted to answer according to their modern gender role views.

Keywords: Hmong, traditional and modern gender roles, decision-making

Voelz (1985) defines those who adhere to notions of men taking on the head-of-household role and women being nurturing wives as holding a traditional gender role view. Those who are open to egalitarian work ideas are identified as holding a modern gender role view (Voelz, 1985). There is increasing research suggesting Hmong women in the United States are taking more modern gender roles (Lo; 2002, Lor, 2010). It is not only Hmong women but also Hmong men who are stepping away from traditional gender roles and expectations. A reason for this shift is often associated with Hmong refugees' relocation to the United States after the Vietnam War. Now that Hmong men and women have a choice between traditional Hmong culture gender role expectations and the more modern views of gender, there may be disparities in how Hmong men and women interact presently as opposed to traditionally. The present study builds upon Barry and Beitel's (2006) study and defines women who endorse traditional gender role as hyperfeminine. At the same time, women who approve modern gender roles are described as hypofeminine (Barry & Beitel, 2006).

This study examines the gender role endorsement of Hmong women and how it affects their decision-making process. The study looked at two different factors that play a crucial role in determining a Hmong woman's gender role endorsement. For one, there are Hmong gender roles that Hmong women in the United States are raised with and are expected to follow, and secondly, there are cross-cultural gender roles that are attributed to women at large in Western society. Both of these indicate that Asian women, specifically Hmong women, have the opportunity to choose whether they

will endorse the roles they were taught to follow or the roles of women in American society.

Hmong Gender Roles

According to the age-old traditions of the Hmong patriarchal society, daughters, young women, and wives are expected to be quiet, passive followers of the demands of their parents, husbands, and elders (Lo, 2002). Hmong women are often expected to take on this role because a Hmong family is structured so that the family is under the "authority of the male head of household" (Duffy, Harmon, Ranard, Thao & Yang, 2004, p.13). This type of structure not only allows men to take control of many of the decisions made in the household, but it also gives women the responsibility of supporting and following the demands of the male head of household (Lee, 1994).

Traditionally, men are brought up to assume roles of superiority such as acting as the head of household or representing the family name (Yang, 1997). Men are often expected to uphold the traditions and values of the family and clan, and Hmong women are to provide unconditional support for their men in turn (Lee, 1994). Similarly, Hmong women are often encouraged by other family members to take the role of caretakers and obedient daughters (Lo, 2002). The role of caretaker for a Hmong woman means that she is responsible for assisting her mother in household chores and in the care of younger siblings. In a traditional Hmong house setting, this is how things would work. That is, the mother tends to her young children, while the father is in charge of taking care of the clan business.

Gender Differences

Street, Kimmel, and Kromrey (1996) found that when women were asked to identify their gender role preferences

based on their personal traits, most women tended to value compassion more than the men who were surveyed. In addition, women also tended to act more on this trait, especially when displaying prosocial behavior. Prosocial behavior is behavior that is considered beneficial to others and can include behaviors such as guiding or comforting others (Eagly, 2009). These research findings suggest that women still value and act upon the feminine traits, such as compassion, that are traditionally attributed to them (Street, et.al, 1996). Asian American women may still value traditional traits attributed to women.

A large number of groups of East Asian American women are from traditionally male-dominated societies. Many of these women find themselves stuck between two gender role ideals, that of the West and the East. Suh (2007) made the important assertion that Asian American women immigrants in the United States are experiencing gender role identity crises because of their acculturation process to more egalitarian ideas in Western society. The integration into Western ideals of gender roles has opened up opportunities for Asian American women, such as working outside the home, a chance that women in more traditional settings would generally not have had (Suh, 2007). Even though Asian American women are moving away from their traditional roles, a study by Lottes and Kuriloff (1992) which looked at the effects of different factors on sex role attitudes found that Asian men and women tend to support ideals of male dominance in contrast to Whites and African American men and women in the United States. This suggests that Asian women may still value traditional gender role ideals.

Gender Role Endorsement

A research study, examining the effects of traditional gender role reinforcement and its affect on men and women's

decision-making processes, conceptually defined traditional and modern gender role reinforcement (Voelz, 1985). Voelz defined those with a traditional gender role outlook as those who support traditional ideals of men taking on the role as the head of household and women taking the role of the obedient wife. In contrast, Voelz' (1985) study defined men and women with egalitarian ideals as 'modern' in their outlook. The traditional gender role outlook can be applied to traditional Hmong ideals of men and women. In contrast, modern gender role outlook can be applied to Western ideals of equality in gender roles.

Because of the traditional roles expected of women, research shows that women are less likely to be assertive in interactions with men because of the traditional roles expected of them. In a study on differences in assertive behavior, researchers found that women often report that they are more assertive in expressing concepts such as love and compliments, whereas men were more assertive in situations that involve being the boss (Hollandsworth, 1977). In another research study involving gender cues in conversations, researchers found that when a woman's voice sounded dominant, raters automatically judged the woman as addressing the man in a condescending way (Hall, 1981). What these two studies suggest is that women are often not expected to speak up in matters of business that include decision making. When they do, they are often viewed negatively. Furthermore, research on interactions in mixed-gender peer groups reveal that girls often display more passive behaviors; they frequently let boys take over and make decisions (Meyer, 1991).

Hypothesis and Limitations

In general, scholars agree that gender role traits and endorsements are impacted by factors such as race and

culture (Kane, 2006, Barry & Beitel, 2006). More so, gender roles often play a role in how men and women interact in their cultures (Filardo, 1996). The purpose of the present research study is to add to the body of literature on Hmong gender roles. Furthermore, the results of this study may provide groundwork for researchers to look further into the impact of gender role preference and interaction between men and women within the Hmong culture.

This study investigates Hmong women's endorsement of traditional and modern gender roles and how this impacts their decision-making process involving Hmong men. The hypothesis is that hypofeminine women, that is, Hmong women who endorse modern gender roles, will be as likely to agree with their male counterparts in a decision-making situation as hyperfeminine women, Hmong women who endorse traditional gender roles. This result is expected because, as the research above suggests, even though Asian American women are being allowed to explore areas that are traditionally male-dominated, Asian cultural groups as a whole still sanction male dominance over women (Lottes, 1992).

This research study used analysis of gender roles and gender role preference of women in Western society and Asian American women to draw conclusions about Hmong women. However, because of the limited research on Asian American women, and specifically on Hmong women's gender roles and attitudes (Kane, 2000), the results from this data should only be viewed as basic groundwork for future studies on Hmong gender roles.

Method

Participants

Participants were 32 Hmong women. These women were all college students. No demographic information, including

age and immigration status, was collected on the women. An email containing the survey link was sent out to all Hmong women currently enrolled at a mid-sized Wisconsin university. The students participated on a voluntary basis.

Materials

Two main measures were used in this study. The Hypergender Ideology Scale devised by Hamburger, Hogben, McGowan, and Dawson (1996) and two written scenarios detailing a decision-making process between a man and a woman. The Likert-scale items in the Hypergender scale asked questions that identified the subject's gender role preference, that is, whether or not the subjects identified their gender role views as hyperfeminine or hypofeminine. The scale had a total of 57 items. Each item was rated from 1 (*strongly disagree*) to 6 (*strongly agree*). The survey asked questions such as "A true man knows how to command others" or "Most women need a man in their lives" to assess subjects' preference or views on their roles as women.

The second test involved a set of two written scenarios that detailed a decision-making process between a man and woman. The race and ethnicity of the man and woman were not specified. Both scenarios involved a decision-making process between a man and a woman who represented either a traditional or modern gender role view. In the traditional scenario, both the man and the woman endorsed a traditional gender role view with regard to the decision-making process. On the other hand, in the modern scenario, both man and woman represented a modern gender role view. The man and the woman in the scenario divided a list of 20 household tasks amongst the two of them. The household tasks assigned to the woman in the scenario varied

based on the particular gender view (i.e., hyperfeminine or hypofeminine) the woman in the scenario was supposed to represent. For example, in the traditional scenario, the man and woman endorsed hyperfeminine gender roles, so the woman was assigned all the traditional women's tasks (e.g., women do dishes). In the modern scenario, since the man and woman endorsed hypofeminine gender roles, the woman had a mixture of traditional women's tasks (e.g., women do dishes) and modern tasks (e.g., women wash cars).

Procedure

All tests were administered to participants online via the survey site Qualtrics. Participants were allowed a two-week time period to take the tests. All of the participants took the Hypergender Ideology Scale first and then were randomly assigned to the modern or traditional scenarios. Once the participants read their scenarios, they were asked to identify whether or not they agreed with the woman's decision in the scenario. The participants were asked to explain their reason for agreeing or disagreeing with the woman's decision in the scenario they read. Tests that were not completed were not valid and were not included in the analysis of the results. There was no time limit for participants to complete the tests once they started.

Results

An average Hypergender score was computed for all participants. A strong adherence to traditional gender roles yielded in a higher score on the Hypergender Ideology Scale. In both traditional and modern scenario conditions, participants yielded an average Hypergender score of 2 out of 6. This suggests that both groups had strong adherence

towards modern gender roles instead of traditional gender roles. To ensure that there was no significant difference between the average Hypergender scores in both groups, an independent sample t-test was run. Average Hypergender scores were not significantly different across traditional and modern conditions, $r(19) = .493, p > .05$.

A Pearson Correlation was conducted to test for a relationship between the average Hypergender score and the chores that were described in both the traditional and modern scenario conditions. For the traditional scenario, the average Hypergender score was strongly correlated with the following chores: *clean the refrigerator*, $r(11) = .41, p < .05$; *scrub the toilet*, $r(11) = .42, p < .05$; *clean the windows*, $r(11) = .33, p < .05$; and *do the laundry*, $r(11) = .37, p < .05$ (see Table 1 for all correlations).

The average Hypergender score did not correlate with any of the chores from the modern scenario. The low Hypergender average scores suggest that all participants had strong adherence towards modern gender roles. Therefore, a strong correlation should have existed between the modern group and the Hypergender score. However, none of the survey items in the modern group significantly correlated with the average Hypergender score. Implications for these paradoxical results will be addressed in the discussion section.

Discussion

The results show that participants in both groups, on average, scored fairly low on the Hypergender Ideology Scale. This suggests that participants endorsed modern gender roles. When average Hypergender scores were correlated with the chore survey scores, significant correlations were found only in the traditional scenario and not the modern scenario. If participants scored lower on the Hypergender

Ideology Scale, their scores should have correlated with chores from the modern scenario. However, the opposite was found; average scores were only strongly correlated with some chores from the traditional scenario.

Table 1
Correlations for average Hypergender score and Modern and Traditional Groups

Chores	Traditional Group	Modern Group
Do the Dishes	.307	.304
Clean the Refrigerator	.739*	
Scrub the Toilet	.733*	
Clean the Windows	.711*	
Clean the Bed Linens	.451	
Do the Laundry	.798*	.243
Vacuum the Drapery	.491	
Dust	.542	.178
Clean the Playroom	.584	
Clean the Dining Room	.606	.264
Take out the Trash		-.021
Rake the Leaves		.046
Clean the Gutter		-.031
Scrub the Toilet		.277
Clean the Office		.117
Clean the Porch		.037

Note. * $p < .05$

Research suggests that even though Asian American women are being allowed to explore areas that are traditionally male-dominated, Asian groups overall still justify male dominance over women (Lottes, 1992). In the scenarios that were presented, there was a man and woman involved in making a decision. After reading the traditional scenario, Hmong women participants may have felt that it was the woman's duty to carry out the more traditional roles, even if the participants did not agree with the roles. This may be a result of the traditional gender role expectations of women in the Hmong community (e.g., Duffy, Harmon, Ranard, Thao & Yang, 2004; Lo, 2002; Lee, 1994).

Another explanation to these paradoxical results may lie in the length of time the Hmong women have lived in the United States or if they were recent immigrants. Research has shown that Hmong women who have lived in the United States long enough to attain an education tend to take more modern views of gender roles (Timm, 1994). If a Hmong woman were to grow up in a community that held on to traditional notions of gender roles (e.g., new immigrant family), she may be more likely to value traditional gender roles as opposed to a woman who grew up in America.

It may seem contradictory on the surface that women reporting that they hold modern gender views would endorse traditional gender-based chores but not modern views. These results support the literature suggesting that Hmong women still internalize traditional gender role beliefs, even though they are displaying modern gender role values. Although Hmong women may hold notions of traditional gender roles to be correct, they still display modern gender role values, a trend that may be attributed to their acculturation process in Western society because of exposure to egalitarian ideas (Suh, 2007).

Conclusion

In sum, women who reportedly hold modern gender role views still support traditional gender roles. Reasons for this may be that Hmong women are facing two different cultural worlds: the Western society and the traditional Hmong society. Because both societies hold conflicting views (i.e., Western society holds modern gender role views, while Hmong society holds traditional gender role views), the Hmong women in this study may have felt compelled to answer according to both societies' views. More importantly, participants of this study were only college students and do not adequately represent Hmong women across all age groups. These women are receiving an American education and do not represent women who may have been educated in other countries or may have not been exposed to education at all.

Questions such as whether an elderly Hmong woman, who spent most of her adulthood in a traditional Hmong society, would feel as conflicted as a college-aged Hmong woman remain to be explored. Future studies should certainly encompass a broader demographic range, including but not limited to age, immigration status, and education level. Furthermore, studies in the future should not only look at Hmong women's gender role views but also at the gender role views of other minority women. Studies should especially study how these minority women are influenced in their decision-making involving a man. The question of whether this phenomenon of holding and displaying contradictory gender role views is only prevalent in Hmong women or in other women as well clearly warrants further examination.

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Gendered Factors Influencing College Students to Tan

Jessica Schumacher

Undergraduate Student, Human Development and Family Studies

Rhonda Richardson

Undergraduate Student, Human Development and Family Studies

Abstract

Tanning has become a social problem because the societal pressure to tan as a means to achieve beauty outweighs the health risks involved in the decision whether or not to tan (Bagdasarov, Banarjee, Greene, & Campo, 2008). Tanning is defined as the exposure to ultraviolet (UV) rays through sun radiation and sun-bed/sunlamp exposure (Cafri, Thompson, Roehrig, Rojas, Sperry, Jacobsen, & Hillhouse, 2008). This nonrandom pilot study examined differences in the factors that influence male and female college students' decisions whether or not to tan by surveying 92 college students at a midwestern college. We hypothesized females would engage in sun-tanning behaviors more frequently than males to improve their appearance while being aware of the risks of UV ray exposure. Some of the collected data supported our hypothesis. Survey data was statistically analyzed using frequencies, cross-tabulations, mean comparisons, independent t-tests, and a reliability analysis. Our findings are consistent with previous research indicating females are more likely to tan because appearance plays a large role in females' self esteem (Cox, Cooper, Vess, Arndt, Goldenberg, & Routledge, 2009). It is recommended that college health

care facilities and counseling centers, middle school and high school teachers, and health educators use this information to work against tanning with the perception of attractiveness.

Keywords: tanning, college students' health risks, UV rays/exposure, appearance

Appearance is not everything. Skin cancer from ultraviolet (UV) rays is one of the most common forms of cancer. Yet, despite the health risks, college students continue to expose themselves to these harmful rays when tanning in order to improve their appearance (Bagdasarov, Banarjee, Greene, & Campo, 2008). The term "tanning" is defined as the exposure to UV rays through sun radiation and sun-bed/sunlamp exposure (Cafri, Thompson, Roehrig, Rojas, Sperry, Jacobsen, & Hillhouse, 2008). Individuals may be more likely to tan when it is perceived to be attractive in society. Social networks are a major factor in an individual's decision to change his or her habits and/or lifestyle in order to fall into the norm of what society perceives as attractive. Targeting social networks such as television commercials, internet ads, magazines, and radio talk shows may be the most beneficial form of intervention to reduce tanning bed use among college students, as it both directly and indirectly impacts a female's level of self-esteem (Bagdasarov et al., 2008). A female's self-esteem is influenced by her appearance and as a result she is more likely to tan than males (Cox, Cooper, Vess, Arndt, Goldenberg, & Routledge, 2009). A sample of college students from a midwestern university was surveyed to better understand gender differences and participants' desire to tan and/or their willingness to risk their health.

Literature Review

Cox et al. (2009) conducted two studies to determine the influences on an individual's decision whether or not to tan. The first study examined societal effects on an individual's decision to tan. Cox et al.'s findings suggest whatever society perceives as attractive, whether it is tanned or pale bodies, influences the individual's intention to tan regardless of the health risks. When tanned bodies are viewed as more attractive, the desire to tan increased however; when pale bodies are viewed as more attractive, the desire to tan decreased. Although participants in Cox et al.'s first study were made aware of tanning-related health risks, knowing those risks did not have any effect on the intentions to tan. The greatest influence participants apparently faced in their decision to tan or not to tan was in relation to society's perceptions of tanning (Cox et al., 2009).

The second study by Cox et al. (2009) demonstrated the relationship between the levels of SPF an individual uses when choosing a tanning product and how often the product is applied based on the outcome the individual is trying to achieve. Cox et al. assert that social acceptance plays a larger role in an individual's decision to use sun block than any potential health risks. Participants whom received the message from society in which fair skin is attractive tend to use a higher SPF more frequently than when society sends the message in which tanned skin is attractive. As long as society perceives tanned bodies as attractive, participants are willing to risk terminal illnesses due to the exposure of UV rays to be socially accepted (Cox et al., 2009).

Pettijohn II et al. (2009) examined the changes in tanning attitudes and behaviors over a ten-year time period. Their research focused on the importance of tanning in relation to dating, appearance, and health. One of their two study groups included 151 male and female undergraduate

college students who were surveyed on their attitudes on sun-tanning in 1995. Their second study group included 208 male and female undergraduate college students from the same university in 2005; participants of the 2005 study answered the same survey as the 1995 participants. Pettijohn II et al.'s survey consisted of a five-point scale used to assess 24 questions related to behaviors about sun-tanning and 12 questions related to the frequency of tanning. Their findings show there was not a significant change in students' attitudes toward sun-tanning; however, the 2005 sample indicates they feel more attractive with a suntan and that males tan less than the 1995 sample of college students. Moreover, based on the behavioral questions of their survey, Pettijohn II et al. noted that the 2005 sample was more likely to engage in sun-tanning activities than the 1995 sample. However, the 2005 sample also had a greater tendency to use sunscreen, tan for special events, and use artificial tanning products (Pettijohn II et al., 2009). Overall, Pettijohn II et al.'s results suggest there was little change in how college students viewed sun-tanning despite media and government efforts to increase awareness of health risks associated with tanning.

Bagdasarov et al. (2008) examined factors predicting the use of tanning beds by college students' in relation to personality, environment, and behavior. Using three personality variables (i.e., self-esteem, sensation-seeking, and tanning image beliefs), Bagdasarov et al. concluded there was no relationship between self-esteem and tanning bed use, but there was a positive correlation between sensation-seeking and intent to use tanning beds. In addition, they also identified a strong correlation between image beliefs and the use of tanning beds. The results supported Bagdasarov et al. hypothesis showing a correlation between use of tanning beds and friends' use of tanning beds. They conclude that an individual's value of appearance is a stronger predictor of

using tanning beds than health-related beliefs. Bagdasarov et al. identified college students either shy away from tanning because of health risks or consider tanning as a means to improve their appearance.

Cafri et al. (2008) studied the sociocultural influences on tanning and concluded that appearance plays a large role in an individual's decision whether or not to tan. According to Cafri et al., general appearance, acne, and body shape all influence the decision to tan, but the reasons an individual decides not to expose themselves to UV rays include immediate skin damage and skin aging. Individuals determine what is attractive based on the perceptions of friends, family, their significant other, and the media. Participants in Cafri et al.'s study did not mention concerns about the health-related risks of tanning, but instead, they voiced concern with how society perceives them.

The Mosher et al. (2005) study examined the factors that influenced college students' desire to be perceived as attractive despite the risk of cancer (2005). Students whose social networks supported the use of sun block were more likely to protect themselves from harmful UV rays, especially on the face. Social networks place a greater influence on facial sunscreen use as compared to sunscreen use on other areas of the body. According to Mosher et al., facial appearance has been proven to influence social evaluations of attractiveness. In addition, they discovered familial support of tanned appearance leads to the use of self-tanning lotions to give the same look that UV rays might give. Romantic partner's support and support of tanned bodies by friends lead to the behavior of tanning. Thus, friends rather than family members seem to influence whether individuals put themselves at risk for cancer by tanning.

Not only do several factors such as social norms or perceptions of friends influence an individual's decisions in

regard to tanning, Pettijohn II et al. (2009) affirm the desire to tan has actually increased over the past decade. Regardless of the health risks involved in tanning, students assume the rewards of tanning (i.e., being more attractive) outweigh the costs (i.e., risk of cancer). Although health risks are directly related to tanning, research indicates it is more important for college students to tan and fit in with their social networks (Cafri et al., 2009).

Most of the existing literature does not address gender differences and college students together in the influences amongst college student's decision whether or not to tan. The research supports females are more concerned with the perception of society in terms of what is viewed as attractive. For the study at hand, we suspected that gender differences among college students would greatly influence student's decisions on whether to tan despite health related risks.

Theoretical Framework

The theoretical framework applied to this study was the Social Exchange Theory. The Social Exchange Theory states that the outcome of human interactions is based on a cost-benefit analysis. The theory is used to explain the behaviors of individuals in regard to the exchange of rewards and costs (Della Ripa & Carrasco, 2007). That is, individuals make decisions based on how others perceive them regardless of the cost, such as time, money, or even their lives. According to the Social Exchange Theory, individuals focus on their reward, on how they appear to others, rather than the costs involved.

Applying the Social Exchange Theory to our study of male and female college students, we hypothesized that if individuals do not see themselves as beautiful, they choose to tan despite being aware of tanning-related health risks in an effort to become more attractive. The Social Exchange

Theory thus predicts friends and social networks have a greater influence on the decision to tan, causing individuals to ignore the warning signs of UV exposure. Ignoring the cost of time, money, and health risks, these individuals see tanning as a reward that may positively influence other people's perceptions of them.

Purpose Statement

The question central to our research was "What are the gendered factors influencing college students' attitudes toward improving appearance or reducing health risks?" Our study's purpose was threefold: (1) to investigate potential differences in the motivations of men compared to the motivations of women that are driving the younger population to continue to put their health at risk, (2) to develop a reliable survey instrument to measure the gender differences in attitudes toward tanning, and (3) to increase the awareness of college health center professionals to encourage young adults to place a higher value on their health rather than appearance and to increase the awareness of gendered factors influencing these individuals' attitudes toward tanning. We predicted females would be more likely than males to expose themselves to UV rays to improve their appearance while knowing the risks of cancer. In accordance with Cox et al.'s (2009) findings, we suspected females would be more likely to engage in sun-tanning behavior than men because the self-esteem of women is greater influenced by their appearance.

Method

Participants

The site of this study was at a university in northwestern Wisconsin. The participants in this study were 52 female and 40 male students.

Table 1
Participants

Age						
	18-19	20-21	22-23	24-25	16+	Total
Male	28	6	3	3	0	40
Female	37	9	4	0	2	52
Past tanning bed use						
	Yes		No			Total
Male	4		36			40
Female	35		17			52
How often they tan						
	Never	1/Month	1/Week	2/Week	3+/Week	Total
Male	37	1	2	0	0	40
Female	23	14	6	5	4	52
How often they use sunscreen						
	Never	Almost Never	Sometimes	Almost Always	Always	Total
Male	8	13	12	5	2	40
Female	8	11	18	13	2	52

Research Design

The purpose of survey research was to be able to sample a small population that could be used to represent a larger population of similar demographics so presumptions could be made about certain characteristics, attitudes, or behaviors of this sample of male and female college students (Babbie, 1990). The survey design type is best described as a cross-sectional survey, with data collected from a cross-section of male and female college students at one point in time. The form of data collection used was self-administered questionnaires. The rationale for this method was low cost, availability, and convenience. University undergraduate students were the population for this study; male and female students in general education classes were the sample. Purposive sampling was used to access equal numbers of both genders in the general education classes. Randomization was not used so that all students had the opportunity to complete the survey. The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

The survey included a brief description of the study, including definition of terms, implied consent, and confidentiality instructions for completing the survey. The survey consisted of five demographic questions regarding gender, age, the use of tanning beds in the past, how often the individual tans, and how often the individual uses sunscreen. Participants were given eleven closed-ended statements which were evaluated using a five-point Likert scale, measuring the intensity of the respondents' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). Questions were developed regarding individual's decisions to tan and how they based decisions on cost and reward analysis.

The questions addressed had a broad range of issues regarding the influences of tanning. Given that similar questions had been used in the 2009 study by Pettijohn II et al. to determine the factors that influence females to tan, we did not pilot this study. Based on the previous survey, we used similar questions to determine the different factors influencing males and females' decisions on whether or not to tan.

Procedure

The data was collected from one sociology course and one psychology course. The researchers used a purposive sampling design which gave them access to general education classes with an equitable number of male and female students. Non-randomization was used in order to be inclusive in the classroom. The researchers left the room while the participants completed the surveys. The psychology class followed the same procedure as the sociology class. Over sampling was done to ensure that the target sample number was met in case of missing data from any surveys.

Data Analysis Plan

The data was cleaned and checked for any statements left blank and/or any irrelevant information. The cleaned surveys were then coded using acronyms for each variable. The study used only one independent variable: *Gender* (GEN). Each survey statement was a dependent variable and given an acronym: *My friends encourage me to tan* (IFL); *My friends compliment my tan* (COM); *I look more attractive with a suntan than without a suntan* (APR); *It is important for my boyfriend/girlfriend to have a suntan* (PRF); *Suntanned individuals are more attractive than those without suntans* (ATR); *Suntanned individuals are more successful than those without suntans* (SUC); *Suntanned individuals are healthier than individuals without suntans* (HLT); *Women engage in sun-tanning behavior more frequently than men* (FRQ); *Being tan now is more important to me than the risk of skin cancer in the future* (IMP); *I am concerned about getting skin cancer from exposure to UV rays* (RSK); *I am aware of the risks involved with UV exposure* (AWN).

The data-analyzing computer program called the *Statistical Package for the Social Sciences* (SPSS) was used to analyze the data. The level of analysis in this study was the individual. Being that groups were compared based on gender, data analysis included frequencies, cross-tabulations, independent t-tests, and mean comparisons. A Cronbach's Alpha reliability analysis was also conducted.

Results

All of the variables were subjected to frequency distribution analysis. Results indicated there was no missing data. Cross-tabulations were run with the independent variable, GEN. For IFL, PRF, SUC, HLT, and IMP, there appeared to be no difference between groups with both males and females having disagreed and/or strongly disagreed. For

ATR, FRQ, and AWN, there appeared to be no difference between groups with both males and females having agreed and/or strongly agreed. For APR, there appeared to be difference between groups with the majority of males having undecided responses and the majority of females have agreed and/or strongly agreed. For COM and RSK, there appeared to be a difference between groups with the majority of males having disagreed and/or strongly disagreed and females having agreed and/or strongly agreed.

Table 2
Cross-Tabulations

IFL						
GEN	SD	D	U	A	SA	Total
Male	80.0%	15.0%	5.0%	0.0%	0.0%	100.0%
Female	40.4%	38.5%	19.2%	1.9%	0.0%	100.0%
COM						
GEN	SD	D	U	A	SA	Total
Male	60.0%	12.5%	10.0%	17.5%	0.0%	100.0%
Female	28.8%	7.7%	9.6%	40.4%	13.5%	100.0%
APR						
GEN	SD	D	U	A	SA	Total
Male	22.5%	0.0%	37.5%	27.5%	12.5%	100.0%
Female	7.7%	5.8%	13.5%	38.5%	34.6%	100.0%
PRF						
GEN	SD	D	U	A	SA	Total
Male	45.0%	22.5%	22.5%	5.0%	5.0%	100.0%
Female	57.7%	26.9%	15.4%	0.0%	0.0%	100.0%
ATR						
GEN	SD	D	U	A	SA	Total
Male	22.5%	15.0%	30.0%	22.5%	10.0%	100.0%
Female	11.5%	36.5%	23.1%	17.3%	11.5%	100.0%
SUC						
GEN	SD	D	U	A	SA	Total
Male	70.0%	5.0%	25.0%	0.0%	0.0%	100.0%
Female	61.5%	25.0%	13.5%	0.0%	0.0%	100.0%
HLT						
GEN	SD	D	U	A	SA	Total
Male	57.5%	12.5%	27.5%	2.5%	0.0%	100.0%
Female	59.6%	23.1%	13.5%	1.9%	1.9%	100.0%
FRQ						
GEN	SD	D	U	A	SA	Total
Male	2.5%	0.0%	7.5%	35.0%	55.0%	100.0%
Female	1.9%	1.9%	7.7%	50.0%	38.5%	100.0%
IMP						
GEN	SD	D	U	A	SA	Total
Male	65.0%	17.5%	12.5%	5.0%	0.0%	100.0%
Female	50.0%	23.1%	19.2%	7.7%	0.0%	100.0%
RSK						
GEN	SD	D	U	A	SA	Total
Male	32.5%	30.0%	22.5%	7.5%	7.5%	100.0%
Female	5.8%	15.4%	26.9%	38.5%	13.5%	100.0%
AWN						
GEN	SD	D	U	A	SA	Total
Male	2.5%	5.0%	5.0%	50.0%	37.5%	100.0%
Female	0.0%	0.0%	7.7%	44.2%	48.1%	100.0%

Note. (GEN)=Gender of participant; (IFL)=My friends encourage me to tan; (COM)=My friends compliment my tan; (APR)=I look more attractive with a suntan than without a suntan; (PRF)=It is important for my boyfriend/girlfriend to have a suntan; (ATR)=Suntanned individuals are more attractive than those without suntans; (SUC)=Suntanned individuals are more successful than those without suntans; (HLT)=Suntanned individuals are healthier than individuals without suntans; (FRQ)=Women engage in sun tanning behavior more frequently than men; (IMP)=Being tan now is more important to me than the risk of skin cancer in the future; (RSK)=I am concerned about getting skin cancer from exposure to UV rays; (AWN)=I am aware of the risks involved with UV exposure. An independent samples t-test was run to compare mean scores for males and females. There were five statistically significant mean differences between genders for the variables IFL, COM, APR, PRF, and RSK.

Table 3
Compare Means

<u>GEN</u>	<u>IFL</u>	<u>COM</u>	<u>APR</u>	<u>PRF</u>	<u>ATR</u>	
Male:						
Mean:	1.25	1.85	3.08	2.03	2.83	
SD:	0.54	1.19	1.31	1.17	1.30	
Range:	2.00	3.00	4.00	4.00	4.00	
Female:						
Mean:	1.83	3.02	3.87	1.58	2.81	
SD:	0.81	1.49	1.19	0.75	1.21	
Range:	3.00	4.00	4.00	2.00	4.00	

<u>GEN</u>	<u>SUC</u>	<u>HLT</u>	<u>FRQ</u>	<u>IMP</u>	<u>RSK</u>	<u>AWN</u>
Male:						
Mean:	1.55	1.75	4.83	1.58	2.28	4.15
SD:	0.88	0.95	0.38	0.90	1.22	.921
Range:	2.00	3.00	1.00	3.00	4.00	4.00
Female:						
Mean:	1.52	1.63	4.25	1.85	3.38	4.40
SD:	0.73	0.93	0.86	1.00	1.09	0.63
Range:	2.00	4.00	3.00	3.00	4.00	2.00

Note. (GEN)=Gender of participant; (IFL)=My friends encourage me to tan; (COM)=My friends compliment my tan; (APR)=I look more attractive with a suntan than without a suntan; (PRF)=It is important for my boyfriend/girlfriend to have a suntan; (ATR)=Suntanned individuals are more attractive than those without suntans; (SUC)=Suntanned individuals are more successful than those without suntans; (HLT)=Suntanned individuals are healthier than individuals without suntans; (FRQ)=Women engage in sun tanning behavior more frequently than men; (IMP)=Being tan now is more important to me than the risk of skin cancer in the future; (RSK)=I am concerned about getting skin cancer from exposure to UV rays; (AWN)=I am aware of the risks involved with UV exposure.

An independent samples t-test was run to compare mean scores for males and females. There were five statistically significant mean differences between genders for the variables IFL, COM, APR, PRF, and RSK.

Table 4
Independent T-tests

Variable	Gender		t	df	Sig.
	Males	Females			
IFL	1.250 (.543)	1.827 (.810)	-4.081	88.505	**0.000
COM	1.850 (1.189)	3.019 (1.488)	-4.189	89.854	**0.000
APR	3.075 (1.309)	3.865 (1.189)	-3.026	90	**0.003
PRF	2.025 (1.165)	1.577 (0.750)	2.177	62.925	*0.038
RSK	2.275 (1.219)	3.385 (1.087)	-4.602	90	**0.000

Note. (IFL)=My friends encourage me to tan; (COM)=My friends compliment my tan; (APR)=I look more attractive with a suntan than without a suntan; (PRF)=It is important for my boyfriend/girlfriend to have a suntan; (RSK)=I am concerned about getting skin cancer from exposure to UV rays. *significant @ $p \leq .05$, **significant @ $p \leq .01$, two tailed. Standard deviations appear in parentheses below means.

A reliability analysis was run to determine whether the variables were a reliable index to measure the major concept, the gendered factors that influence college students' attitudes toward tanning to increase appearance or reduce health risk. Cronbach's Alpha is a measure of reliability and was 0.636. This value indicates that survey items were a reliable measure of the major concept.

Discussion

The hypothesis that females engage in tanning more frequently than males to improve their appearance in spite of awareness of health risks was supported by the data in variables FRQ and AWN. Frequency results indicated strong support that females tanned more frequently than males to improve their appearance.

Statistically significant correlations ($p < 0.01$ level) were found between several of the variables. There were significant correlations between variables relating to the appearance of the individual and their decision whether or not to tan. Mosher and Danoff-Burg (2005) concluded individuals whose family and friends tanned or complimented their tan were more likely to engage in tanning. We also found a correlation between an individual's desire to tan and knowing the health risks involved.

Ninety-five percent of the surveyed males and 80% of the surveyed females disagreed and/or strongly disagreed that their friends encouraged them to tan. In contrast to this result, Bagdasorov et al. (2008) and Mosher et al. (2005) suggest if individuals' close friends and families perceive tanned bodies as more attractive than individuals are more likely to engage in tanning. In the present study, participants' qualitative responses contradicted the survey results, since many responses commented, "My friends would think it is dumb."

Other qualitative comments, supporting the claim *My friends encourage me to tan*, included "The people I like influence my decision to tan"; "I wanted to look more tan because it was the 'popular' thing to do"; "My friends influence me because they do it and sometimes we go tan together"; "My friends and the media—fashion magazines always show tan people which makes me want to get a better

tan.” Given these qualitative comments and considering Social Exchange Theory, college students not only tan to feel more accepted, but they believe tanning is worth the risk to be more “popular” in school.

Seventy-two percent of male college students as opposed to 36% of females disagreed or strongly disagreed that their friends compliment their tan. Mosher et al. (2005) suggests compliments toward females from friends and family support their decision to tan. We suspect males on the other hand are less likely to admit getting a compliment for a tan because it is not masculine; that is, if a male compliments another male’s tan both males may be seen as effeminate. In fact, in response to one of the survey questions asking, “Who or what is your biggest influence on whether to tan or not to tan?,” one male participant responded with “I’m not that self-conscious.” This response suggests that the participant believes he does not have the self-conscious mindset of females in regard to appearance and how others may perceive his physical attributes. In today’s society, a man’s self-consciousness and concern with his appearance may be considered as more feminine behaviors.

Thirty-seven percent of male college students were undecided when asked if they look more attractive with a suntan. This number may be due to males’ refusal to label themselves as attractive because doing so is often seen as not masculine. However, 73% of females either agreed or strongly agreed they look more attractive with a suntan. This shows strong support in the survey statement “An individual looks more attractive with a suntan rather than without one.” We found females are more willing to tan to improve their appearance. Considering the Social Exchange Theory, this means females are willing to tan to be more attractive at

the expense of increasing their chances of developing skin cancer.

A few male participants commented that the specific reasons that influence their decision not to tan were "I'm a male, therefore, looks don't bother me"; "I'm a guy and I feel I shouldn't tan"; and "I don't tan because I feel I am already good looking." At the same time, a majority of female college students responded that specific reasons they chose to tan was because they wanted to feel better about themselves, and they wanted to have a tanned "glow." A connection between females' self-esteem and their decision on whether to tan or not to tan may also be explained by Bagdasarov et al.'s (2008) assertion in which people with lower levels of self-esteem are more likely to engage in risky behaviors. Indeed, one female participant commented that one of the biggest reasons she tanned was for self confidence. She wrote, "When you feel better about yourself you often can present yourself in a different light, being more outgoing, etc. Many other things can influence self confidence other than tanning as well such as hair, nails, and working out."

Based on the qualitative comments we found people want to feel good about themselves. Feeling good about oneself comes from having positive self-esteem as a reflection of one's body. Since the research has suggested that tanning can improve appearance, this may be an option for an individual to feel good about themselves. Tanning packages are very affordable allowing for an easy way to gain confidence. It is evident that this individual, along with many others, engaged in sun-tanning behavior for the desired result of being more confident and to increase her self-esteem. The males' responses indicated their level of self-esteem is much higher than that of the female participants. With higher

levels of self-esteem, an individual will feel better about his/her body and therefore, engage in sun-tanning behavior to improve his/her appearance less.

Approximately 68% of males and 75% of females either disagreed or strongly disagreed with the statement that they prefer their partners to be tan. However, this finding contrasts what Mosher and Danoff-Burg (2005) concluded about the influence of an individual's partner on tanning behaviors. Their study's results suggest when the significant other engages in tanning behavior, individuals are more likely to engage in tanning behavior themselves.

Although the majority of males and females disagreed or strongly disagreed with the statement "It is important for my boyfriend/girlfriend to have a suntan," some participants commented on the influence of their partners on their own tanning behavior. For example, one female participant stated that her boyfriend was her biggest influence on why she tanned because she "wants to look good for him." Similarly, a male participant indicated that his biggest influence on whether or not to tan was his "girlfriend, because she tans once a week." These types of answers highlight the different social factors that may impact a person's decision on whether or not to tan. In the case of the significant other, for example, we discovered that college students whose partners feel they are more attractive with a tan are more likely to tan in order to look good for their partner.

Considering that there seems to be a connection between an individual's tanning behavior and how partners or close family members perceive tanning, the Social Exchange Theory suggests that individuals base their decision whether to tan on the responses received by those people close to them. People are also more likely to tan when their partners

tan or support their tan. The Social Exchange Theory suggests that the reactions we get from a certain behavior will determine our desire to continue that behavior. In terms of this specific statement, those who have a reason for tanning and have partners that influence this behavior are more likely to continue this behavior.

Sixty-two percent of male students and about 21% of females disagreed and/or strongly disagreed that they are concerned about getting skin cancer from exposure to UV rays. Almost every participant, both male and female, was aware of the risks that are associated with UV exposure; however, females were more likely to express their concern for getting skin cancer. This result is somewhat surprising considering the number of female participants who tan (67%) and the number of male participants who do not tan (90%). Indeed, participants' responses suggest that females are more concerned about getting skin cancer from the exposure to UV rays. Females may be more concerned about health-related dangers of tanning because statistically females tan more frequently than males. Male respondents on the other hand may have either disagreed or strongly disagreed because they typically do not tan. Moreover, one reason why males are not concerned about getting skin cancer may be that admitting such concerns would be seen as unmanly.

A majority of college students, both male and female, either disagreed or strongly disagreed that sun-tanned individuals are more successful than those without suntans and that sun-tanned individuals are healthier than those without suntans. Individuals could have perceived looking healthy as looking pale or they could have seen looking healthy as having a natural looking glow, with the help of UV rays. Looking healthy depends on the individual's perception of healthy. These findings also imply that individuals do not

view success in accordance with the way an individual is perceived.

A majority of college students, both male and female, were undecided if sun-tanned individuals are more attractive than those without a suntan. Despite our findings, Cox et al. (2009) claim females especially believe they are more attractive with a suntan and that tanned skin is often perceived as attractive. One reason for this result may be that individuals do not want to acknowledge appearance matters, or they may not want to disclose whether people with suntans are perceived as more attractive.

A majority of college students disagreed and/or strongly disagreed that being tan now is more important than the risk of cancer in the future. This contradicts Cox et al.'s (2009) findings in which they assert that college students are usually not concerned about risks of cancer. Furthermore, college students are also more motivated to live up to cultural standards and willing to compromise their health (Cox et al., 2009). In light of Cox et al.'s results, we suspect that participants may have disagreed and/or strongly disagreed that being tan now is more important than the risk of cancer in the future because it is human nature to not want cancer. Respondents clearly preferred to not be exposed to cancer; at the same time though, some respondents preferred tanning while disregarding the risk at hand.

Several central themes emerged from the analysis of qualitative comments. For one, appearance is a major factor in an individual's decision on whether or not to tan. Factors influencing an individual's decision to tan are determined by what is perceived as attractive by society at large (Cafri et al., 2009). The majority of participants' comments in the study at hand expressed similar factors. Respondents indicated they either have tanned or do tan on a regular basis because

they believe they look better with a tan, feel more confident, want a healthy glow, or want to clear acne. Participants who chose not to tan made comments such as "I do not want to get wrinkly faster and turning orange is very unattractive" and "I don't tan because I freckle and freckles look horrible on me."

Limitations

The major limitations to this study are the nonrandom design and small sample size. For those questions with a high number of undecided responses, using a seven-point or even a ten-point Likert scale could have provided more variation. In addition, having a larger sample size could have increase diversity.

Implications for Practitioners

The data demonstrates that appearance and friends are two major factors that influence an individual's decision to tan or not. More education describing the importance of protecting skin from harmful UV rays should be distributed in middle and high school health education classes given the fact that at these particular ages peers have a strong influence on decisions individuals make. Doing so would allow early education on the harmful effects of sun exposure.

Most college students are aware of the risks of UV rays, but are not concerned at this point in their lives about getting skin cancer. Given that females tan to improve their appearance, it might be beneficial to focus on the appearance-related reasons of why one should not tan, such as skin damage and skin aging.

Implications for Future Research

There are several implications for future research. First,

it is recommended that future research should include a random, large sample in order to generalize the findings nationwide. Furthermore, in order to increase the variability on the scale, researchers should use a seven-point Likert scale, rather than a five-point.

Should the same survey be used again, additional questions or statements should be added. For example, asking participants who have tanned if they did so because of an upcoming occasion, since qualitative comments indicated that many participants tanned only for special occasions such as weddings, prom, and vacations.

Additionally, it may be beneficial to use several different study designs. A comparison between groups who tan and groups who do not tan, for example, could provide results that may help differentiate between factors that may influence tanning behavior. Moreover, a longitudinal study, surveying participants every ten years beginning at the college age may yield valuable results, such as different factors that influenced their decisions to tan or not to tan. Given that society is always changing, such a longitudinal study could provide insight on changing perceptions as individuals become more concerned with their health.

Conclusion

Previous studies indicate skin cancer is a growing risk among college-aged students. This research at hand has been backed up with previous research suggesting that females are more likely than males to tan to improve appearance. Although our results show a large majority of participants are aware of the health risks involved in tanning, many continue to expose themselves to harmful UV rays. At this point in time, many of the participants are not as concerned with the risk of cancer. During college, both males and females

often explore new romantic relationships, so feeling more confident by having a tanned body seems to outweigh future health-related risks.

Moreover, because it is important for many young adults, especially college students, to feel like they fit in with a group, many are willing to take risks such as tanning; even though there may be a concern for the risk of future skin cancer, individuals like the participants of our study believe it is more important to be socially accepted. Throughout this research, we found individuals are willing to compromise their health in order to be more socially accepted. The findings suggest females are more likely to tan because tanning is portrayed as more acceptable for females, motivating females to engage in tanning more frequently. Females are also tanning because their friends, family, and romantic partners influence this decision; males on the other hand are less likely to engage in this behavior because their friends and family do not encourage this behavior. Nevertheless, increasing support for healthy bodies rather than tanned bodies can influence an individual to make better lifelong decisions.

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Facebook Used as a Recruiting Tool

Lauren Hooker

Undergraduate Student, Psychology

Brandon Rathke

Undergraduate Student, Psychology

Abstract

Social media is becoming increasingly integrated in the hiring process as companies choose their employees from widening pools of applicants. Past studies revealed that it is important for job seekers to recognize the effect of an unprofessional social profile on their job prospects. This study examines the impact of unprofessional Facebook profiles and gender of the applicant on the likelihood of being hired. Each participant was presented with one of four hiring packets and questionnaires to see if they would hire the applicant for a human resource generalist position. Results indicate that there is not a significant correlation between having a professional or unprofessional Facebook profile and the likelihood of being hired according to gender. However, there was a significant effect of having a professional or unprofessional profile and being hired for the job regardless of gender.

Keywords: hiring, selection, Facebook

Social media has become a valuable tool for employers in the hiring process. In a recent study, 77% of executive recruiters claimed they used search engines during the job screening process (Spon, 2010). According to a 2006 Career Builder

survey, 12% of 1,150 employers used social networking sites in the hiring process. Of those survey participants, 63% made hiring decisions based on social networking sites such as Facebook (Spon, 2010). As the hiring process becomes increasingly competitive with the economic recession, more job seekers will gain work experience and a postsecondary education. Since the cost of hiring new applicants is high, companies need to minimize turnover rates by choosing the right applicant for the position. Applicants now not only have to worry about necessary experience and education for positions but also about the professionalism of their social networking profiles.

The increasing number of applicants competing for jobs has made decisions to hire from just a resume and interview difficult. High applicant numbers and fierce competition make using social profiles in the hiring process appealing, since employers can discover additional information. In a 2009 study, Kluemper and Rosen compared personality traits and social profiles. They found that conscientiousness, agreeableness, and emotionally stable personalities are less likely to post problematic content that would negatively influence an employer's hiring decision. The traits of conscientiousness, agreeableness, and emotional stability are what employers seem to value in their employees. The fact that these traits can be conveyed through social networking sites is valuable to employers. In addition, applicants are likely to place their everyday thoughts, pictures from past events, employers, colleges, relationship status, family members, favorite musical groups, movies, television shows, quotes, books, and activities on this profile, making the use of Facebook a valuable tool in the hiring process.

According to research, social media has become a valuable tool in the hiring process. A study that compared social networking profile printouts, emphasizing alcohol, family, or

career-related content, found that applicants are more likely to be chosen for a managerial position if they have a family or a professional-oriented profile rather than an alcohol-oriented profile (Bohnert & Ross, 2009). Also, applicants with a more professional profile were given a higher rate of pay in a manager position for a company (Bohnert & Ross, 2009). Another study revealed that applicants did not want employers to see alcohol-related content (Peluchette & Karl, 2008). Results suggest that applicants have a good idea what characteristics (e.g., professionalism) employers are looking for in applicants and recognize that having alcohol-related content in their social networking profiles can have adverse effects on their job search.

Spon (2010) looked at negative, positive, and private Facebook profiles and concluded that applicants with negative profiles are rated lower in regard to candidate pursuit and are less likely to be offered an interview than any other candidates that applied for the position. This research suggests that social profiles can make the selection process more risky for the applicant. Applicants' social media profiles provide access to all kinds of personal information for the employer that they would not receive in just an interview, resume, or cover letter. While checking an applicant's social profile may not be illegal, those employers deem it unfair to seek irrelevant information on a potential employee who meets the required qualifications (Mckenzie, 2010). Still, other employers see social media profiles as very valuable to the hiring process and continue to use them until doing so becomes illegal. Previous research found that 20% depicted sexual activity, 25% had seminude or provocative photos, and 50% contained profanity (Peluchette & Karl, 2007). Employers would never see these personal characteristics in an interview or on a resume. Peluchette and Karl (2008) noted that males are more likely to post risky photos on their Facebook profiles than females, whereas females are more

likely to post romantic and love pictures. Peluchette and Karl (2008) also suggested that females are more worried than males about the content of their profiles. Thus, there may be gender differences in the social profiles, such as content of information and how it used in the hiring process.

Considering that past research has shown the negative impact of social profiles on an employer's first impression of the applicant and female applicants have been shown at a disadvantage in hiring, we wanted to further understand whether gender *and* professional or unprofessional Facebook profiles impact the likelihood that an applicant will be hired. Our primary hypothesis was that participants (i.e., employers) are more likely to choose applicants with professional profiles when given Facebook as a recruiting tool. However, we suspected that applicants' gender will not influence the participants in the hiring process. Instead, the hiring process would be based on the individual characteristics of the applicant and how qualified he or she is for the professional position.

Method

Participants

Participants ($N = 36$; 17 men and 19 women) were college students enrolled in psychology courses. Participants ($M_{age} = 22$) were asked if they were familiar or not familiar with Facebook. All but two participants indicated they were very familiar with Facebook. Students received one credit for their class's research participation to participate in the study.

Materials

Participants were given one of four application packets for this study. All packets contained the same company mission statement, a job description, and a resume for a human resources generalist. To indicate the gender of the

applicant, the resume either had the name *Courtney Johnson*, *Gary Thompson*, *Sarah Williams*, or *Ted Nielsen*. The packet also contained one of four versions of a Facebook page, which indicated the gender of the applicant and included professional or unprofessional content. Professional content included things like pictures of family, travel, and pets. Unprofessional content included things like sexually suggestive pictures, drinking, and drug use. The four Facebook versions were as follows: (1) male, unprofessional; (2) female, unprofessional; (3) male professional; or (4) female, professional. The applicant packet also contained a questionnaire that asked participants a series of demographic questions and their feelings about the job applicant. One question was used to determine the likelihood that the applicant would be hired. Participants rated the likelihood that they would hire the applicant on a Likert Scale, ranging from 1 (*definitely not*) to 5 (*definitely would*).

Procedure

Participants completed the study in groups of three. Participants were seated at different tables, so they could not see each other's applicant packets and could answer the questions without being influenced by other participants. After an explanation of the study, participants received an informed consent form to sign. Next, participants were given one of the four application packets. Each application package was coded with a number on the top page to keep track of which version each participant received. All conditions had the same number of participants. The participants were given fifteen minutes to complete the study. After they completed the study, participants were debriefed and thanked for their participation.

Results

All 36 participants were included in the analysis. A 2 (professional versus unprofessional) $\times$ 2 (male versus female) factorial analysis of variance was performed to determine if the type of Facebook profile influenced being hired for the position. There was a statistical significance for professionalism, $F(1, 32) = 14.59, p < .05$. Applicants with professional Facebook profiles ($M = 3.8, SD = .88$) were more likely to be hired than applicants with unprofessional Facebook profiles ($M = 2.6, SD = .96$). There was no statistical significance for gender, $F(1, 32) = 1.501, p > .05$. Male applicants ($M = 3.4, SD = 1.12$) were not more likely to be hired than female applicants ($M = 3.0, SD = 1.06$). There was not a significant interaction between gender and professionalism, $F(1, 32) = .574, p > .05$. Thus, the effect of professionalism on the likelihood of being hired did not change based on the gender of the applicant.

Discussion

We hypothesized that professionalism of the Facebook profile would influence the likelihood of being hired for a professional position and that the applicant's gender would not influence the likelihood that they would be hired. The statistical analysis supports our hypothesis: there is not a significant interaction between gender and having a professional or unprofessional Facebook profile. Moreover, applicants with professional profiles appear to be more likely to be hired for the job. Therefore, job applicants should consider what information they make available on their Facebook profile or on any other social networking site. Results also reveal that males are not more likely to be hired over females regardless of the professionalism of the Facebook profile.

Given the limited research on gender and social networking profiles, we are able to add to existing studies

of research in the area. Future research should consider exploring the influence of applicants' gender in the hiring process based on their social networking profiles to explore the further generalizability of these findings to other populations or larger sample sizes.

A limitation to this study is the sample size. It would have been beneficial to have more than sixty participants due to our design factorial to ensure that the study would have adequate power to detect a true effect. However, it should be noted that despite the small sample size, statistically significant results were found. This suggests that the size of the effect is large enough to be detected in a small sample. Another limitation to this study is that all the participants were college students. College students are not likely to have experience in hiring employees, so they may choose applicants based on different criteria than human resource professionals. Moreover, college students may be more influenced by Facebook profiles than adults who may not have as much experience with social networking. It should be noted though that Facebook is growing in the adult population, so more and more people are gaining experience with social networking sites. In addition, business professionals might take the study more seriously in contrast to college students who are sometimes not truly interested in research but want to earn extra credit.

Another limitation is the fact that we were only able to make a screen print of the photo page of the Facebook profile used in this research. Being able to provide the entire Facebook profile could have been more beneficial to the research. In fact, the Facebook profiles had to be staged with fake pictures that did not always look like the same person. Thus, using Facebook profiles created with the help of a volunteer may increase the believability of the experimental manipulation.

In addition, future research could look at the gender of the participant and the gender of the applicant to see if the gender of the hiring manager influences the likelihood of one gender being hired over the other. Also, researchers could focus on the type of position for which the company is hiring. It would be interesting to see if males are still more likely to be hired for management positions than females. Thirdly, future research could look at real life hiring processes of a company by having the applicant go into an interview with a resume and then have the hiring manager look at the social networking profiles of the applicant to see if the combined assessment would influence the hiring manager's decision.

Finding a professional job is a very competitive process, made even more difficult given the high unemployment rates in the United States. Employers are now looking for more information about their applicants so that they can better assess an applicant's character and degree of professionalism and to supplement information provided by interviews and resumes. Although our research does not indicate an interaction effect of gender and professionalism of social networking profiles on the likelihood of being hired, our findings suggest that professionalism of profiles by itself may influence the decision-making process during the applicant screening phase for a job position. Therefore, applicants should consider what information they place on their Facebook profiles. Indeed, applicants should be wary of placing personal information they do not wish everyone to see on their profiles.

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The Relationship between Gender and College Students' Career Development

Sarah Fischer

Undergraduate Student, Human Development and Family
Studies

Brianna Sauter

Undergraduate Student, Human Development and Family
Studies

Abstract

Although some may think they have control over their future, studies show that one of the most significant influences on career development is the exploration of the environment and the self (Adragna, 2009). The current weak economy may limit a student's financial resources; therefore, choosing a career that is a good fit is more imperative than ever before. This cross-sectional and nonrandom pilot study surveyed 57 male and female freshmen and sophomore college students at a small midwestern university on their past experiences that have influenced their career choices as well as their future career aspirations. We predicted that there would be moderate differences in gender regarding college students' career development based on current literature. Survey data was statistically analyzed using cross-tabulations, mean comparisons, independent t-tests, and a reliability analysis. Results indicated that there were no significant gender differences, but moderate gender differences were found within certain variables. Males considered their parents' career as more of an influence than females did, but did not consider many other factors as very influential (e.g., the media or their parents in general). Gender differences were

also found within their current major and ideal career choice. Implications for practitioners are that support, guidance, and resources should be provided early, but children should also be allowed to make autonomous decisions. Future research would benefit from a large, randomized national sample along with rephrasing the negatively correlated dependent variables.

Keywords: career development, career influence, career resources, college students, career exploration

Choosing a career is perhaps one of the most stressful and important decisions one can make in a lifetime because so much of a person's life is dedicated to the occupation. Although some may think they have control over their future, studies show that one of the most significant influences on future occupations is the exploration of the environment and the self (Adragna, 2009). Research on this topic is essential because adolescents and young adults make important decisions regarding their lifelong career which coincides with their establishment of personal identity (Bregman & Killen, 1999). Many researchers have already explored the relationship between career development and past experiences among high school and college students. These studies have concluded that factors such as parents, teachers, siblings, resources, and gender all influence career development in some way (Adragna, 2009; Helwig, 2008; Tang, Pan, & Newmeyer, 2008; Kniveton, 2004; Bregman & Killen, 1999). Career development is defined as the process of exploring, planning, and implementing postsecondary career options (Tang et al., 2008). However, several studies have not taken economic factors into consideration. The current economic state may affect career development more than one may

think, as it limits financial resources and makes choosing a career that is a good fit more imperative than ever. College students may no longer be able to afford school for more than four years. This is why we further investigated influences of career development among college students. To study which factors may play a significant role in college students' career development, male and female college students ages 18 and above were surveyed at a small midwestern university regarding their personal, past experiences and their relationship with their current career path. Gender was chosen as the premise of the study because of its importance in relation to career development trends. By gaining an understanding of differences in gender throughout career development, one may gain insight into gender differences within the workplace, such as occupational separation.

Literature Review

A literature review was conducted to investigate what past experiences have influenced freshmen and sophomore college students in choosing their career path. However, most of the studies we reviewed focused on high school students' and adolescents' career aspirations. Adranga (2009), for example, published a study examining high school students' career choices. In this study, the researcher reviewed the more intimate relationships between students and their families, including parental expectations and how students themselves perceive their own abilities. In general, students with higher self-esteem and motivation were more compelled to achieve a successful career; almost all students interviewed, regardless of their self-esteem level, planned to become more successful than their parents. Yet, students were also aware of educational limitations they faced; those who applied themselves academically felt they had a better chance of following through on their aspirations (Adranga, 2009).

In a more comprehensive, longitudinal study, Helwig (2008) studied the career development and preferences of young children as they progressed through high school. The researcher interviewed 208 students in 2nd grade about their career plans, expectations, and aspirations and followed up with them every two years throughout high school and once five years after graduation. In Helwig's study, constructivism is used to explain the origins of influence on children's career choice; constructivism is defined as the act of using one's personal experiences and life events for career counseling (Helwig, 2008). Gottfredson's Stage Development Theory explains a person's career development through individual principles depending on age. Helwig's (2008) study showed how 2nd-12th graders developed and changed their career preferences. Like Gottfredson's Theory (as cited in Helwig, 2008), younger males in Helwig's study expressed the most passion about masculine careers, whereas females preferred more feminine careers. Once Helwig's participants entered middle school, both genders preferred more masculine careers. In addition, during high school, males began to express more realistic expectations of career aspirations and expected salaries. Data collected five years after high school graduation shows the greatest influences on students' career decisions as being the mother, closely followed by fathers and high school teachers (Helwig, 2008).

Another study, conducted by Tang et al. (2008) examined the effect of various factors influencing high school students' future career plans. Tang et al. surveyed 141 students, recorded age, gender, and ethnicity and considered the educational backgrounds and occupations of their parents. Framing their research in the Social Cognitive Career Development Theory, the researchers determined that students are able to come to a career decision based upon their own personal interests and learning experiences. However, students in Tang et al.'s

study were also well-aware of any lack of resources that may have prevented them from reaching their career goals. As a solution, Tang et al. recommended that school counselors make it a priority to assist students in overcoming potential barriers by investigating potential aid programs and having students personally seek assistance within the community.

Kniveton's (2004) study on high school students was conducted to explain the influences on their choice of career. In the study, Kniveton compared 174 males and 174 females ranging from 14-18 years. A questionnaire and interview was administered to these students to gather information about their family, background, and other aspects. Results suggest that there are multiple factors that may lead adolescents to their chosen career. Parents, for example, are the greatest influence according to Kniveton. Similarly, teachers, peers, and siblings also influence the career development of high school students. In addition, Kniveton points out that gender also plays a role because males in this study were highly interested in occupations that include physical and outdoor labor, whereas females expressed interest in social jobs, focusing on working with people.

Gender furthermore may also play a role in regards to motivational factors. Male students in Kniveton's (2004) study ranked money as their first priority, while females rated enjoying their work as their top concern; secondary factors were switched around: females ranked money as their second priority, while males made enjoying their work a secondary concern. Third factors were the same for both genders, which included utilizing valuable skills and feeling satisfied in one's chosen career.

Bregman and Killen (1999) conducted a study on adolescents' and young adults' reasoning for career choice and their parents' influence. Researchers interviewed 72 students in three different age groups: 10th graders, young

college students, and older college students. The study's objectives were to establish a correlation between autonomy in social development and to find differences between moral, conventional, and prudential career choices. For example, participants were given one of three scenarios based on sports, business, and college decisions that adolescents and young adults might face. Next, researchers asked the participants to determine which type of reasoning they used to get their answers. These responses were analyzed by the researchers and grouped into three categories: nontraditional career alternatives, interpersonal, parallel activity preference, and hedonistic (self-gratifying). Furthermore, students were asked to explain their thought process throughout a series of questions; results show that there is no strong correlation between gender or age and career choices, but rather between the scenarios (i.e., sports, business, and college decisions) of the students regarding career development. The researchers also found that most participants thought it was more important to alter a planned lifestyle decision for a career rather than for personal reasons (e.g., to be with a significant other) or hedonistic reasons (e.g., to increase leisure time). In fact, most students used personal reasons as their explanation for choosing their career paths, and they used pragmatic concerns as reasons for changing a career path (Bregman & Killen, 1999).

Considering existing literature, it becomes clear that gender, parents' role/influence, and resources (e.g., counselors and career services) all play a role in a person's career development. For example, the more resources or guidance a person has, the more likely he or she is to choose a successful career path (Tang, et al., 2008). All of this literature is continually helpful to professionals working with adolescents and young adults. However, researchers must take into consideration the current state of economy

and how imperative it is to keep this research up-to-date. Therefore, the present study surveyed college students at a small midwestern university and investigated whether experiences due to gender differences affected career path decisions. Perhaps by looking further into these factors, professionals working with this population as well as parents will be able to take the actions necessary to guide any child to a successful future under any circumstance.

Theoretical Framework

The Ecological Systems Theory is perhaps the most diverse of any of the family theories. This theory takes the focus off an individual and places it on a person's interactions with his or her environments (Salkind, 2005). The Ecological Systems Theory is broken up into four subsystems that build upon each other during human development. The smallest subsystem, the microsystem, only pertains to one's self and the immediate environment. A student's microsystem may be his or her parents' dining room during a family dinner. The next level up is the mesosystem, which focuses on the relationships between different microsystems. An example of this includes the relationship between an individual's family experiences and his or her peer experiences. The third level up is the exosystem. The exosystem may involve a social setting that does not directly include the individual. For example, if a student's family is expecting a new child, this may change how the student performs in school depending on his or her adjustment to the new child. The student is affected but is not directly involved in caring for the new child. The last level of the Ecological Systems Theory is called the macrosystem. This level contains all of the previous levels and also takes the cultural context into account (e.g., social media and popular culture).

The Ecological Systems Theory is perhaps to the best framework to use to explore the question of what past experiences influence freshmen and sophomore college students' career development. Since students are constantly learning and gaining new experiences, the idea that individuals develop through their interaction and exposure to different environments is synonymous with the Ecological Systems Theory.

If one applies the Ecological Systems Theory to the research question, one is able to make a number of predictions regarding future life choice. Based on the Ecological Systems Theory, one can expect that students' experiences with their family, school, peers, media, neighborhood, culture, and other environmental factors would have profound impacts on students' decisions on what they will do with their lives. Each of these environmental influences can impact a student's chosen career path. For example, one would assume that those who have enough resources (e.g., money, supportive family/peers, etc.) would be the ones most likely to attend and finish college. Similarly, given the Ecological Systems Theory, one would expect that students who lack these types of resources are less likely to attend and finish college, choosing other career paths instead.

Purpose Statement

The purpose of this study consisted of three principles: (1) to examine the relationship between past gender and experiences that influence career development with a sample of young college students, (2) to develop a reliable survey instrument that measures those experiences that influence career development, and (3) to enhance the knowledge of professionals, (e.g., teachers, counselors, and social workers) who work with this population, regarding freshman and sophomore college students' career

development. Parents, moreover, may also benefit from this by learning how to positively influence their children to the fullest potential. The study's results may also be beneficial to adolescents so that they can understand why and how they develop certain career preferences.

The central research question in this study was "Are there gender differences regarding past experiences that have influenced freshmen and sophomore college students in choosing their career development?" We predicted that there would be moderate differences in gender regarding young college students' career development. Existing literature suggests that female students mature faster than male students, and therefore, females often consider career choices before males. Also, literature indicates that parents have different effects on either gender, depending on which parent the student grows up with and which parent they confide in for support with their career decisions.

Method

Participants

The site of this study was at a small university in northwestern Wisconsin. The participants consisted of 57 undergraduate freshmen and sophomore students enrolled in a general education class required at the university. Of these 57 students, 33 were males, and 24 were females. There were 50 students between the ages of 18-19, and seven who were between the ages of 20-21.

Research Design

The purpose of the study was to make inferences from a comparable larger population with regards to characteristics, attitudes, and behaviors of the sample of male and female college students (Babbie, 1990). The survey design type can be described as a cross-sectional study design, illustrating

the attitudes of male and female college students at one point in time. The form of data collection was self-administered questionnaires. The rationale of using this method was that it was the most efficient method to gather data directly on campus due to low cost, convenience, and quick return of data.

The population was the university student population; the sample was male and female students in a particular general education requirement class that provided equitable amounts of males and females. The study used a non-random probability design because the sampling took place in classroom settings where all students were included. Purposive sampling was used because the purpose was to gather data on attitudes of an equitable number of male and female college students. The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

In order to identify the attitudes of young college males and females towards their career development a survey was created. The survey included required information necessary to meet ethical and legal regulations, such as implied consent, risks/benefits and instructions. It consisted of demographic questions on age, gender, and academic status. Participants were given ten closed-ended statements based on a five-point Likert scale, measuring the intensity of the respondents' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). Questions were derived from literature and theory based on gender and career development.

The survey instrument had both face validity and content validity. Face validity refers to the instrument questions having a logical connection to the concept and research question. Because the questions addressed in the survey were informed by literature, it was determined that they clearly connected to the relationship between past experiences and

career development. Content validity refers to the instrument statements' coverage of the full range of concepts under the larger topic. The questions addressed included a variety of ideas on career development. The survey was not piloted due to time restraints.

Procedure

The survey process began once the researchers were granted permission to survey students enrolled in three speech communication classes. For each of the general education courses, the procedures used were identical and all took place within the same building at the university. First, the professor introduced the researchers, and then one researcher introduced the topic and reasons for the study. Prior to survey administration, students were informed of their rights and the risks and benefits of participating. While the study focused on freshmen and sophomores, all students were encouraged to participate in the survey. Randomization was not used in order to be inclusive in the classroom. The students were then instructed to begin the surveys as soon as the researchers and the professor left the room. Once all surveys were completed, the researchers thank the participants and collected the questionnaires.

Data Analysis Plan

Once the surveys were completed, they were first checked for missing data then coded using acronyms for each variable. The independent variable on the survey was *gender* (GEN), the category used to compare groups. *Age* (AGE) and *academic status* (AST) were demographic variables to describe the participants. Each survey statement was a dependent variable and given an acronym: *My parents played a role in my career development* (PCD); *My sibling(s) has/have influenced my career development*

(SCD); *What I see on the media has influenced my career development* (MCD); *My parent's career had an influence on my career choice* (PCC); *My career goals have changed within the last five years* (CGC); *My parents would support my career choice no matter what I decide* (PSC); *My high school provided me with resources for career development, such as counselors, and/or a career center* (HSR); *The amount of money I can make has influenced my career development* (AMI); *The amount of money my family makes has influenced my career development* (AMF); *I am choosing a career with stable employment instead of something I love doing* (CSE).

To analyze the data, the data-analyzing computer program called the *Statistical Package for the Social Sciences* (SPSS) was used. The individual was used as the level of analysis. Given that groups were being compared based on gender, data analysis included frequencies, cross-tabulations, mean comparisons, and independent t-tests. A Cronbach's Alpha reliability analysis was also conducted.

Results

The frequency distribution analysis indicated that there was missing data from the surveys consisting of two surveys with missing responses. To resolve this issue, we marked the two unanswered questions on each of the surveys as "unsure" so that we could keep them in the sample. Cross-tabulations were run with the independent variable, GEN. For MCD, there was a difference between groups with the majority of females being undecided and majority of males responding strongly disagree/disagree. For PCC, there was also a difference between groups with the majority of females responding strongly disagree/disagree and majority of males responding strongly agree/agree. Dependent variables PCD, CGC, and AMI showed more than a 10% gender difference

with more males noting strongly agree/agree in PCD and AMI and more females responding strongly agree/agree in CGC. There was no difference between groups for SCD, PSC, HSR, AMF, and CSE.

Table 1
Cross-Tabulations

PCD						
GEN	SD	D	U	A	SA	Total
Male	3.2%	9.7%	22.6%	48.4%	16.1%	100.0%
Female	7.7%	11.5%	11.5%	46.2%	23.1%	100.0%
SCD						
GEN	SD	D	U	A	SA	Total
Male	38.7%	22.6%	9.7%	29.0%	0.0%	100.0%
Female	23.1%	38.5%	19.2%	15.4%	3.8%	100.0%
MCD						
GEN	SD	D	U	A	SA	Total
Male	12.9%	32.3%	32.3%	22.6%	0.0%	100.0%
Female	3.8%	15.4%	50.0%	26.9%	3.8%	100.0%
PCC						
GEN	SD	D	U	A	SA	Total
Male	9.7%	22.6%	9.7%	38.7%	19.4%	100.0%
Female	19.2%	46.2%	7.7%	19.2%	7.7%	100.0%
CGC						
GEN	SD	D	U	A	SA	Total
Male	6.5%	12.9%	22.6%	25.8%	32.3%	100.0%
Female	7.7%	11.5%	11.5%	38.5%	30.8%	100.0%
PSC						
GEN	SD	D	U	A	SA	Total
Male	0.0%	0.0%	3.1%	21.9%	75.0%	100.0%
Female	0.0%	0.0%	4.0%	28.0%	68.0%	100.0%
HSR						
GEN	SD	D	U	A	SA	Total
Male	6.5%	12.9%	9.7%	45.2%	29.0%	100.0%
Female	3.8%	11.5%	3.8%	34.6%	46.2%	100.0%
AMI						
GEN	SD	D	U	A	SA	Total
Male	3.2%	9.7%	9.7%	48.8%	29.0%	100.0%
Female	0.0%	11.5%	30.8%	38.5%	19.2%	100.0%
AMF						
GEN	SD	D	U	A	SA	Total
Male	6.5%	19.4%	29.0%	32.3%	12.9%	100.0%
Female	7.7%	15.4%	30.8%	34.6%	11.5%	100.0%
CSE						
GEN	SD	D	U	A	SA	Total
Male	12.9%	29.0%	38.7%	16.1%	3.2%	100.0%
Female	23.1%	30.8%	23.1%	15.4%	7.7%	100.0%

Note. (GEN)=Gender of participant; (PCD)= My parents played a role in my career development; (SCD)= My sibling(s) has/have influenced my career development; (MCD)= What I see on the media has influenced my career development; (PCC)= My parent's career had an influence on my career development; (CGC)= My career goals have changed within the last 5 years; (PSC)= My parents would support my career choice no matter what I decide; (HSR)= My high school provided me with resources for career development, such as counselors, and/or a career center; (AMI)= The amount of money I can make has influenced my career development; (AMF)= The amount of money my family makes has influenced my career development; (CSE)= I am choosing a career with stable employment instead of something I love to do.

Table 2
Compare Means

<u>GEN</u>	<u>PCD</u>	<u>SCD</u>	<u>MCD</u>	<u>PCC</u>	<u>CGC</u>
Male:					
Mean:	3.65	2.29	2.65	3.35	3.65
SD:	.98	1.27	.98	1.31	1.25
Range:	4.00	3.00	3.00	4.00	4.00
Female:					
Mean:	3.65	2.38	3.12	2.50	3.73
SD:	1.20	1.13	.86	1.24	1.25
Range:	4.00	4.00	4.00	4.00	4.00
<u>GEN</u>	<u>PSC</u>	<u>HSR</u>	<u>AMI</u>	<u>AMF</u>	<u>SOLE</u>
Male:					
Mean:	3.65	4.71	3.90	3.26	2.68
SD:	.53	1.17	1.04	1.12	1.01
Range:	2.00	4.00	4.00	4.00	4.00
Female:					
Mean:	4.65	4.08	3.65	3.27	2.54
SD:	.56	1.16	.94	1.12	1.24
Range:	2.00	4.00	3.00	4.00	4.00

Note. Note. (GEN)=Gender of participant; (PCD) = My parents played a role in my career development; (SCD)= My sibling(s) has/have influenced my career development; (MCD)= What I see on the media has influenced my career development; (PCC)= My parent's career had an influence on my career development; (CGC)= My career goals have changed within the last 5 years; (PSC)= My parents would support my career choice no matter what I decide; (HSR)= My high school provided me with resources for career development, such as counselors, and/or a career center; (AMI)= The amount of money I can make has influenced my career development; (AMF)= The amount of money my family makes has influenced my career development; (CSE)= I am choosing a career with stable employment instead of something I love to do.

Independent samples t-tests were run to compare mean scores for males and females. There were no significant mean differences between the genders.

A reliability analysis was run to indicate if the variables were a reliable index to measure the major concept, the relationship between gender and young college students' career development. When running the scale reliability in SPSS, the analyses were run across each variable. Cronbach's Alpha is a measure of reliability and was 0.301. This value indicates that survey items were not a reliable measure of the major concept; there were five variables that were negatively correlated with the rest (SCD, MCD, PSC, HSR, and CSE).

Discussion

Our hypothesis that there would be moderate differences in gender regarding young college students' career development found mixed support. Cross-tabulations indicate a few variables that show moderate differences between the groups. Independent t-tests and mean comparisons were also conducted, but they did not show statistically significant mean differences between the genders. Each variable will be discussed in terms of how the results were supported in the literature and/or by theory.

Participants varied in responses on whether the media had influenced their career development; roughly the same number of females agreed (29.2%) as males disagreed (30.3%). This finding was supported in the literature from Kniveton (2004), who discovered that the media has a profound influence on females by veering them away from science-based occupations. However, what Kniveton does not address in his study is the overwhelming amount of undecided responses within both genders. In fact, there

may be several reasons for the large number of undecided responses. One possibility is that participants did not fully understand the question. Another possibility could be that participants have never thought about how the media has influenced them before. In U.S. culture, the media is inescapable and has influenced all the participants in this study, but because the influence can be subliminal, they may not have been aware of it.

Similar response differences occurred in regard to the question of whether participants' parents' careers had an influence on their own career choice. A large majority of females either disagreed or strongly disagreed, while the large majority of males either agreed or strongly agreed. This finding received mixed support from the literature, with Adranga's (2009) study claiming that a parent's career *does* have an influence on the child's career choice. In Adranga's study, even though almost all participants planned to become more successful than their parents, there was no significant difference in the level of prestige between the jobs of students and their parents. One reason for such a large difference in responses between genders could be because males may feel a responsibility to live up to, or even exceed, the expectations or prestige of the family.

In regard to whether students thought their parents played a role in their career development in general, the majority of participants agreed or strongly agreed; however, more females agreed or strongly agreed, while males' responses were more varied across the scale. Kniveton's (2004) study found that parents have the greatest influence on their child's career development by far. Bregman and Killen's (1999) study further found that supported career choices were considered based on personal growth, while rejected choices were based on personal relationship (e.g., parental relationships). Bregman and Killen's findings

juxtaposed with current social norms may help explain why not as many males as females agreed or strongly agreed. Males may not want to admit that their parents played a role in their career development; they may want to maintain their sense of masculinity and independence by thinking they have made a successful decision on their own.

When asked whether the amount of money one can earn has influenced their career development, the large majority of participants agreed or strongly agreed. Although trends were the same, more males than females agreed or strongly agreed. Kniveton's (2004) study supports these findings and discusses motivational factors that play a role in choosing a career. In fact, Kniveton notes that males rank money as their first priority, while females prefer enjoying their work. Given the need of financial stability, it is not surprising that future earnings are taken into consideration, but Kniveton's findings may also help explain why more males than females consider their possible future income as a factor in their career development.

The large majority of participants agreed or strongly agreed that their parents would support their career choice no matter what they chose. This result parallels Adranga (2009) who asserts that families who offer support and allow their children to make autonomous career decisions generate positive identity development.

Along with parental support and guidance, children also benefit from resources provided by their school (e.g., counselors, career services). In fact, the responses of males and females to the statement on whether their high school had provided resources for career development were very similar. The majority of males and females stated that they agreed or strongly agreed on their school providing counselors or a career center for career development support. Tang et al. (2008) states various implications for

school counselors to consider in supporting their students throughout high school, including providing a meaningful learning experience and self-efficacy for proper career development. The findings in Tang et al.'s study furthermore indicate the overall importance of school counselors for students through the programs and guidance these counselors provide. The majority of surveyed participants agreed or strongly agreed that their career goals had changed in the past five years. However, female participants had a moderately larger response compared to males in agreeing, and 21.2% of males responded as being undecided on the statement. These findings actually challenged Gottfredson's Developmental Stage Theory (as cited in Helwig, 2008), which suggests that females are generally more likely to develop an understanding of their career goals and aspirations before males (Helwig, 2008). At the same time, Gottfredson's claim may explain why a number of males were undecided on the statement. In addition, another reason for the large number of undecided responses could be the ambiguity of the response options. If there would have been more options for responses, such as a seven-point scale instead of a five-point, students would have had more opportunity to respond accurately.

The majority of participants disagreed or strongly disagreed that their siblings had an influence on their career development. This contrasts with Helwig's (2008) findings which argue that siblings *can* have an impact on career development by adding a sense of competition throughout the lifespan. However, this does not account for circumstances in which the participant does not actually have a sibling. In fact, one participant noted "I'm adopted and I believe this is why my brother has had almost no influence on my career."

Participants varied in responses on whether they chose a career with stable employment rather than an occupation

they feel very passionate about. For males, the majority disagreed or strongly disagreed, followed closely by undecided responses. Females showed a similar trend. Again the high number of undecided responses may be due to the lack of range in the scale for response; if the scale were open to a larger variety of responses, the results may have been clearer. In Kniveton's (2004) study, motivational factors were ranked among males and females, and males ranked money as their first factor, while females ranked enjoying the work itself as first. Females surveyed disagreed slightly more, meaning they were more likely to choose a career they thoroughly enjoyed rather than one based on how much money they could make. This could help explain the trend of females typically choosing careers in care giving and nurturing fields which tend to have lower paying salaries.

On the survey, participants were also asked whether the amount of money their family makes influences their career development. The large majority of participants agreed or strongly agreed. However, there was also a large amount of undecided responses, with 30.3% of males and 25% of females. This particular result is of special interest because we had predicted that the amount of money a family makes would be a major determinant in if, how long, or what postsecondary school a student is able to attend based on the Ecological Systems Theory. Considering current economic times and the Ecological Systems Theory framework, it is not surprising that an individual's interaction with his or her environment affects individual choices (Salkind, 2005). In regards to participants' responses, we suspect that there may be several reasons for the large number of undecided responses in the current study. For one, it is possible that participants did not fully understand the question, resulting in participants giving a neutral response by default. Another

possibility is that there should have been more qualifying questions on the survey. That is, having a larger variable scale of 1-7 could have expanded the responses.

Qualitative Analysis

There were several identified themes regarding gender differences within the qualitative comments. When analyzing the participants' current majors, we discovered that there were general differences among the genders. Females generally held majors related to art and design, such as interior design and art education. Males, on the other hand, generally held majors related to engineering, technology, or other hands-on careers, such as construction and manufacturing engineering. The hypothesis was supported by showing moderate differences between the genders, as the groups generally maintain different career aspirations.

Another difference found within the qualitative data concerned the "ideal" occupation of the participants. Males' ideal occupations tended to be a lot more prestigious than what they are currently studying to be. Perhaps this is because males are more concerned with status and prestige than females. Many of these answers were also sports-related occupations. Among these sports-related occupations were "sports analyst" and "professional athlete." Females, however, tended to be more realistic about their ideal career choice, choosing higher-up positions requiring more education and/or experience that relate to their major, such as nursing, art teacher, or soccer coach. These responses are similar to Kniveton's (2004) discussion of gender differences within career development. This discussion suggests that females mature more quickly than males in career attitudes, explaining more realistic ideal career aspirations.

Limitations

A major limitation to this study is the small sample size and the non-random design. The high number of undecided responses may be due to the use of the five-point scale instead of a seven-point scale with more variation. In addition, the numerous undecided responses may also have contributed to the low reliability.

Another limitation of this study was the sampling deadline. This posed a time restraint to the researchers and, therefore, greatly reduced the number of potential participants. Additionally, the narrow research questions may have limited insight to differences in career choice between other groups of people (e.g., age groups), as this research question only examined the differences in career development in terms of gender.

Implications for Practitioners

The data demonstrated that there are no significant differences between gender and career development, even though a few notable differences were found. Nevertheless, practitioners may benefit from this information while working with students in choosing their future career. From the qualitative comments on the surveys, it is apparent that males have less realistic dreams in terms of careers compared to females. Perhaps, this is due to different maturation rates of males and females. School counselors will find this information beneficial in helping both males and females choose a career that is attainable and successful. The qualitative comments show gender separation between several academic majors. From this, implications for future practitioners may also include educating students on a variety of possible careers, regardless of gender, and providing enough resources to attain those careers along with encouraging them not to choose a career based on

gender stereotypes.

Much of the data also illustrates the major influence of parental roles. Not only do students recognize their parents as a major influence on their career choices, but students also want to feel autonomous in making their own decisions. Because of this, it may be helpful for parents to provide support, guidance and resources, while encouraging their children to make autonomous decisions. This suggestion can also be extended to other practitioners working with children and students, such as teachers, case workers, and school counselors.

Implications for Future Research

There are several suggestions for future research on career development. For instance, in order for a future study to be applicable nationwide, a random, large sample must be included. Furthermore, it would be useful to make changes to some of the survey questions. The Cronbach's Alpha score for this study was calculated to be .301. This value indicates that survey items were not a reliable measure of the major concept; the variables SCD, MCD, PSC, HSR, and CSE were negatively correlated with the rest. If the same survey would be used in future research, these five variables should be removed or rewritten since the respondents answered them in the opposite way they were intended.

Additionally, several different study designs should be employed, such as conducting a random design. Exploring different ways of obtaining data (e.g., interviewing students) would provide more insight on their lived experiences. Another suggestion for future research would be to conduct a longitudinal study, following individuals from adolescence to adulthood. This would allow researchers to monitor the changes in career paths throughout the lifespan and assess events that influence those changes.

Furthermore, future research may want to consider examining differences in career paths between other groups of people (e.g., age groups or academic status). Although it is important to realize the differences between genders in regard to career development, there may also be important differences in career development between different age groups, for example, giving insight to generational differences and societal growth. It may also be helpful for future research to examine the effect of modern day factors on career development, such as socioeconomic status. This would give insight to the effects of external and internal resources on career development (e.g., amount of income and resilience).

Conclusion

Given the uncertain economy and diminishing resources for students, it is imperative that students receive sound career advice as early as possible. As previous studies have indicated, there are many influential factors and differences among the genders in terms of career development. Parental support, change of career goals, high school resources, and amount of money a student will earn are major factors influencing career development among adolescents and college students. This data is useful for the family studies field, especially for educators and parents in order to support their students' career development. The present study's findings continue to point out various gender differences within career choices, emphasizing the importance of existing and future research on this topic.

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Influential Media: Insight into the College Male's Perspective on Masculinity

Vanessa Kuettel

Undergraduate Student, Human Development and Family Studies

Kayce Planert

Undergraduate Student, Human Development and Family Studies

Abstract

Masculinity is an important element of male identity, as well as an increasing topic of media interest. Although masculinity exists in many forms, simply one dominant form is focused upon throughout society (Smiler, 2006). The media's masculine messages emphasize violence, aggression, and emotional restraint (Soulliere, 2006). Furthermore, the avoidance of feminine traits increases the likelihood males will partake in activities which objectify, control, and abuse women (Kivel & Johnson, 2009). Statistics have shown that one in every four women will experience domestic violence within her lifetime (National Coalition Against Domestic Violence, 2007). The central research question in this study was "What is the college male perspective on contemporary masculinity in relation to media influences?" We predicted that there would be a correlation between responding strongly to the survey statements *I learn about what a "real man" is from media sources (RMM)* and *I apply media messages about masculinity to my life (AMM)* and to the survey statements which refer to masculine characteristics depicted within media messages. The study's findings were supported within the literature, that is, masculinity can be influenced by social aspects including media messages.

Survey data was statistically analyzed using descriptive statistics: frequencies, mean comparisons and correlations as well as Cronbach's Alpha reliability analysis. Implications for practitioners, health educators, and males in general will focus on bringing awareness to the negative influences of the media as well as exposing males to alternative forms of masculinity. Future research would benefit from a random, large, national sample.

Keywords: masculinity, media influences, real man, male college students

The media plays a sometimes silent yet almost always influential role in the lives of individuals. Television, film, and video games have been shown to have the capability to convey information as well as impact comprehension of gender identities as a result of the messages portray by the media (Kivel & Johnson, 2009; Johnson, Richmond, & Kivel, 2008). The media's ability to impact identity and gender construction does not just affect one gender. Men are becoming ever more susceptible to the societal obsession with image that women have been subjected to for years (Ricciardelli, Clow, & White, 2010). One important element of male identity, and an increasing topic of media interest, is masculinity.

Masculinity, the cultural ideas and norms regulating male behavior (Kivel & Johnson, 2009; Soulliere, 2006), is believed to exist in many different forms, yet simply one main form of masculinity is focused upon throughout society and within the literature (Smiler, 2006). This form of dominant masculinity, which emerges from the media's depictions of males, is characterized by violence, aggression, competitiveness and toughness (Soulliere, 2006). These

messages are detrimental to a male's expression and personal definition of masculinity. By emphasizing the dominant form of masculinity, men are given limited opportunities to express different types of masculinity such as being non-violent and/or emotional-orientated (Soulliere, 2006).

Therefore, it is important to explore the relationship between media influence, defined as television, video games, films, commercials, and televised sporting events (Kivel & Johnson, 2009; Soulliere, 2006), and masculinity development and expression. This current study investigated the potential media influence on the college male's definition of masculinity.

Literature Review

A review of the literature was conducted to explore the possible connections between media and masculinity as well as the concept of masculinity in general. There was a consistent finding within the literature that masculinity can be influenced by multiple social aspects. One study discussed the unstable state of masculinity and the influence of social validation on masculinity, while another study identified the various types of masculinity. Although these studies do not specifically mention media impact, they are essential to understanding the multiple influences on masculinity.

Kivel and Johnson (2009) studied male participants' early memories and how these memories helped them understand how their gender was influenced by the media. The study's central purpose was to explore the consumption of media by young men to recognize how they construct their own masculinity. Individual experiences were linked to social/cultural issues of gender socialization and participant's responses mirrored broader masculinity themes in society.

Johnson et al. (2008) analyzed male television and movie watching and discovered that participants were inclined to

respond excitedly to on-screen violence. They determined that the socially dominant form of masculinity, or hegemonic masculinity, was created through individual and institutional applications and expressed through media messages within television shows and films. Johnson et al. concluded that men used the media to help create their own identities and that the media was responsible for the presence of violence within that definition.

Vandello et al. (2008) conducted five studies on the concept of manhood; their third study though was omitted from this literature review because it focused on women. The first study conducted by Vandello et al. maintains manhood is believed to be an elusive status that requires social assistance to achieve and social proof to preserve. Vandello et al.'s second study strengthened this position. The fourth study asserts men exhibit intense feelings of anxiety, shame, and the feeling of being threatened when their manhood is questioned or endangered. The fifth study revealed men demonstrated a greater likelihood of having physically aggressive thoughts and also concluded men may become more prone to re-establishing their manhood through the means of aggression.

Smiler (2006) identified 12 images of masculinity and assessed their endorsement among participants. The 12 masculine images included the "average Joe," businessman, family man, jock, nerd, "player," nonconformist, criminal, sensitive "new-age" guy, "tough" guy, effeminate, and "country." The study revealed that there was a greater association with compliance to male norms with men who endorsed the businessman, jock, and tough guy images of masculinity. There was a modest to no association to compliance with male norms for the men who endorsed the "average Joe," family, nonconformists, and "player" images.

Smiler suggests this indicates that these images are seen as less masculine.

Soulliere (2006) analyzed messages concerning masculinity being presented by the World Wrestling Entertainment (WWE) programs and pay-per-view events. The study found that messages from the WWE contained themes of aggression and violence, emotional restraint, and success and achievement. Soulliere maintains these themes are connected with the leading masculinity found within American society. Soulliere also asserts that WWE programs send the additional message that men have to show proof of their manhood via displays of aggression, questioning other men's manhood, and feminizing other men.

Although the current literature described images of masculinity (Smiler, 2006), indicated the potential of the media to teach males about masculinity (Kivel, & Johnson, 2009; Johnson et al., 2008; Soulliere, 2006), and demonstrated the unstable nature of manhood (Vandello et al., 2008), the current literature does not define masculinity in relation to media influences from the perspective of college male participants. This study explored the college male's perception on masculinity and how the media influences it, thereby contributing to the existing literature regarding masculinity and the influence media has upon it.

Theoretical Framework

The theory used to inform this study was the Family Ecology Theory (Strong, DeVault, & Cohen, 2005). This theory maintains that families both impact and are impacted by their environments. The Family Ecology Theory also asserts that the family and its members are impacted by multiple environments. The theory identifies four environments: the microsystem, mesosystem, exosystem, and macrosystem. The microsystem encompasses the most direct settings and

includes the people who exert the most influence over the individuals; such as the individual's school environment, home, family, and friends. The networks and pathways among microsystems, for instance, the interaction between the family and school demands placed on the individual, form the mesosystem. The exosystem contains the environments in which individuals do not directly participate but which are influential. For example, an individual's parents' place of work or the committees which enact campus policies might constitute the exosystem. The culture surrounding the individuals and the laws, values, and traditions of the society as a whole create the macrosystem (Strong et al., 2005).

As applied to this study, this theory would predict that the media would influence the college male's perspective on masculinity. The theory indicates that since the messages being portrayed are part of males' culture, therefore belonging within the macrosystem, these messages would have an impact on their lives and thus their perspective on what comprises masculinity.

Purpose Statement

The purpose of this study was threefold: (1) to investigate the relationship between the college male's perspective on contemporary masculinity and the potential impact the media has upon their definition, (2) to develop a reliable survey instrument which measures the college males' perception of a "real man" and the potential of media influence on their definition, and (3) to increase males' awareness of media influence in addition to offering an insight into their personal definition of masculinity.

The central research question in this study was "What is the college male perspective on contemporary masculinity in relation to media influences?" We predicted a correlation between responding strongly to the survey statements *I*

learn about what a "real man" is from media sources and I apply media messages about masculinity to my life and to statements referring to masculine characteristics depicted within media messages such as a "real man" feels the pursuit of status (achievement) is very important (PUR); competes and wins (CAW); is strong and brave (SAB); "gets" the girl (GTG); shows emotional restraint (EMR); is aggressive (AGG); engages in violent acts when he feels justified (VIO); emasculates other men to feel secure in his masculinity (EOM); and must defend his manhood (DEF).

Our hypothesis was based upon evidence from both literature and theory. The literature demonstrates that the media does provide messages regarding masculinity, and the Family Ecology Theory states that these messages, which are an aspect of an individual's macrosystem, exhibit influence within the lives of the individual.

Method

Participants

This study was conducted at a mid-size midwestern University. The participants were 113 undergraduate male students who were enrolled in either a general education course or a major-specific introductory course (refer to Table 1 Frequency Distributions of Age and Hours of Media Watched).

Research Design

The purpose of survey research was to be able to generalize from a sample to a similar larger population so that some inferences could be made about some characteristic, attitude, or behavior of this population of male college students (Babbie, 1990). This study employed a cross-sectional research design in order to capture attitudes from male college students at one point-in-time. A cross-sectional

research design was employed to discover the prevalence of a phenomenon, situation, problem, attitude, or issue by taking a cross-section sample of the population being studied (Kumar, 2005). The study also used self-administered questionnaires for data collection. The rationale for using this method is that self-administered questionnaires are convenient, low cost, and yield a quick return of data.

Table 1

Frequency Distributions of Age and Hours of Media Watched

Age	Frequency	Percentage
18-19	64	57.7%
20-21	31	27.7%
22-23	10	8.9%
24+	7	6.3%
Totals	112	100.0%

Hour of Media Watched	Frequency	Percentage
0-5	19	17.0%
6-10	27	24.1%
11-15	16	14.3%
16-20	27	24.1%
21-25	7	6.3%
26+	16	14.3%
Totals	112	100.0%

The population for this study was the university student population. The sample was the male students in either the general education course or the major-specific introductory course. The study used a non-random purposive sampling design; therefore we surveyed only the individuals who possessed the information needed for the study. Using a

non-random sample was the best method to ensure for inclusiveness within the classroom, since every student had an equal and independent chance to participant. Also, the purposive sample design allowed for the surveying of a specific population, college males (Kumar, 2005). The study was approved by the Institutional Review Board (IRB).

Data Collection Instrument

To assess college males' perspective on masculinity with regards to media influences a survey was designed. The survey included a brief description of the study, definition of any terms not commonly known, risks and benefits, time commitment, confidentiality, voluntary participation, contact information of the research team and the supervisor, and instructions for completing the survey.

The survey consisted of two demographic questions regarding the participants' gender and ages and 11 closed-ended statements based on a five-point Likert scale. The Likert scale was used to measure the intensity of the participants' attitudes ranging from one (*strongly disagree*) to five (*strongly agree*). The survey also included three demographic questions pertaining to the participants' weekly media consumption and use of violent media plus two open-ended questions about media consumption and masculinity. Statements and questions were generated by means of literature on masculinity development and media messages and theory.

The survey instrument had both face validity and content validity. Face validity refers to the extent that there is a logical correlation between the instrument questions and the research question as well as concepts reviewed within the literature. The survey possessed face validity, since the statements and questions within the survey were derived

from the literature, and thus these questions demonstrated the relationship between masculinity and media messages. Content validity refers to the degree in which the instrument statements address the entirety of concepts within the literature reviewed. The survey statements and questions addressed the plethora of media messages regarding masculinity. The survey was piloted to four college males to assess the clarity of the statements. The four college males stated the survey was too judgmental and presumptuous. Upon feedback, the survey statements were changed to be more objective in nature. To make the survey statements more objective, the signal phrase, "A real man" was added to the survey before the list of statements.

Procedure

Three classes were surveyed: one general education course and two separate sections of the major-specific introductory course. Purposive sampling design was used to identify courses that were typically male dominated.

Students in all three courses were read instructions, including the risks and benefits, and given the informed consent forms. Female students were encouraged to take the survey but were also informed that their responses would not be included in the data for the study. Randomization was not used in order to be inclusive in the classroom. Once the students were handed the surveys, both the course instructor and the researchers left the room. Upon completion of the surveys, questionnaires were collected and students were thanked for their participation. In order to ensure the study had reached its target sample number, in the case of missing data from male participants, the researchers over sampled by 13 surveys.

Data Analysis Plan

The data was first cleaned and checked for missing data. The cleaned surveys were then coded using acronyms for each variable. All demographic questions were given a three letter acronym: *Age of the respondents* (AGE); *How many hours of media per week do you watch* (HOM); *Do you, on average, play violent video games at least twice a week* (VVG); *Do you, on average, watch violent related television shows, movies, or televised sporting events at least twice a week* (VTV). The demographic question about gender was not given an acronym since all respondents were male. Each survey statement which used the Likert scale was also given a three letter acronym: *I learn about what a "real man" is from media sources* (RMM); *I apply media messages about masculinity to my life* (AMM); *Feels the pursuit of status (achievement) is very important* (PUR); *Competes and wins* (CAW); *Is strong and brave* (SAB); *"Gets" the girl* (GTG); *Shows emotional restraint* (EMR); *Is aggressive* (AGG); *Engages in violent acts when he feels justified* (VIO); *Emasculates other men to feel secure in his masculinity* (EOM); *Must defend his manhood* (DEF).

The data was analyzed using the computer program *Statistical Package for the Social Sciences* (SPSS). The individual was used as the level of analysis. Since groups were not compared, the data analysis included: frequencies, mean comparisons, and correlations. Additionally, a Cronbach's Alpha reliability analysis was conducted.

Results

All variables were subjected to frequency distribution analysis. The demographic category of self-identifying gender was eliminated from analysis, since no respondents had selected that gender category. The researchers encountered missing data in the form of a survey respondent not including

his age on his survey; thus it was not included in the data analysis. The final number of respondents' responses analyzed was $N=112$. A number of survey respondents did not clarify the number of hours of media they consumed per week, but instead wrote the word "a lot," which the researchers assessed as meaning 16-20 hours consumed per week based on the number of video games and television shows listed in the qualitative survey responses of those respondents.

For the variables RMM and AMM the majority of respondents disagreed and/or strongly disagreed that they learned about what a "real man" is from media sources and that they applied the media messages about masculinity to their life. For the variables AGG, VIO, and EOM, the majority of respondents disagreed and/or strongly disagreed, with a large number of respondents being undecided that a "real man" is aggressive, engages in violent acts when he is justified, and emasculates other men to feel secure in his masculinity. For the variables PUR, CAW, SAB, GTG, EMR, and DEF, the majority of respondents agreed and/or strongly agreed, with a large number of respondents being undecided, that a "real man" feels the pursuit of status (achievement) is very important, competes and wins, is strong and brave, "gets" the girl, shows emotional restraint, and must defend his manhood (refer to Table 2 for Frequency Distribution Analysis and Table 3 for Means Comparison).

Correlations were also run on the variables RMM, AMM, SAB, GTG, EMR, AGG, VIO, EOM, and DEF. A small significant relationship appears to exist between RMM and SAB, EMR, VIO, and DEF as well as between AMM and SAB, GTG, VIO, and DEF. In addition, a medium significant relationship seems to be present between RMM and GTG, EOM, and AGG as well as between AMM and AGG and EOM (refer to Table 4).

Table 2
Frequency Distribution Analysis

Variable	SD	D	U	A	SA	Total
RMM	35.7%	33.9%	17.9%	9.8%	2.7%	100.0%
AMM	25.9%	35.7%	17.0%	20.5%	0.9%	100.0%
PUR	4.5%	9.8%	25.9%	43.8%	16.1%	100.0%
CAW	5.4%	12.5%	21.4%	34.8%	25.9%	100.0%
SAB	4.5%	7.1%	20.5%	41.1%	26.8%	100.0%
GTG	7.1%	22.3%	28.6%	28.6%	13.4%	100.0%
EMR	11.6%	25.0%	21.4%	34.8%	7.1%	100.0%
AGG	17.9%	27.7%	27.7%	21.4%	5.4%	100.0%
VIO	21.4%	25.9%	29.5%	15.2%	8.0%	100.0%
EOM	26.8%	36.6%	25.0%	8.0%	3.6%	100.0%
DEF	10.7%	20.5%	22.3%	30.4%	16.1%	100.0%

Note. (RMM)=I learn about what a "real man" is from media sources; (AMM)=I apply media messages about masculinity to my life; (PUR)=Feels the pursuit of status (achievement) is very important; (CAW)=Competes and wins; (SAB)=Strong and brave; (GTG)="Gets" the girl; (EMR)=Shows emotional restraint; (AGG)=Is aggressive; (VIO)=Engages in violent acts when he feels justified; (EOM)=Emasculates other men to feel secure in his masculinity; (DEF)=Must defend his manhood.

Table 3
Means Comparison

	RMM	AMM	PUR	CAW	SAB	GTG	EMR	AGG	VIO	EOM	DEF
Mean:	2.10	2.35	3.57	3.63	3.79	3.19	3.01	2.69	2.63	2.25	3.21
SD:	1.08	1.10	1.02	1.15	1.06	1.14	1.17	1.15	1.21	1.05	1.25
Range:	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Note. (RMM)=I learn about what a "real man" is from media sources; (AMM)=I apply media messages about masculinity to my life; (PUR)=Feels the pursuit of status (achievement) is very important; (CAW)=Competes and wins; (SAB)=Strong and brave; (GTG)="Gets" the girl; (EMR)=Shows emotional restraint; (AGG)=Is aggressive; (VIO)=Engages in violent acts when he feels justified; (EOM)=Emasculates other men to feel secure in his masculinity; (DEF)=Must defend his manhood.

Table 4
Pearson Correlation Matrix

Variable	RMM	AMM	PUR	CAW	SAB	GTG	EMR	AGG	VIO	EOM	DEF
RMM		.627**				.320**	.256**	.392**	.269**	.390**	
AMM						.276**		.354**		.366**	.288**
PUR				.340**	.331**	.278**	.246**	.337**	.300**		
CAW					.553**	.469**		.305**	.275**		.479**
SAB						.554**	.300**	.320**	.302**		.463**
GTG								.502**	.462**	.290**	.453**
EMR											
AGG									.619**	.517**	.508**
VIO										.379**	.410**
EOM											.462**

Note. (RMM)=I learn about what a "real man" is from media sources; (AMM)=I apply media messages about masculinity to my life; (PUR)=Feels the pursuit of status (achievement) is very important; (CAW)=Competes and wins; (SAB)=Strong and brave; (GTG)="Gets" the girl; (EMR)=Shows emotional restraint; (AGG)=Is aggressive; (VIO)=Engages in violent acts when he feels justified; (EOM)=Emasculates other men to feel secure in his masculinity; (DEF)=Must defend his manhood. ~N=112; **Correlation is significant at the $p < 0.01$ (two-tailed)

A reliability analysis was run to indicate if the 11 variables (RMM, AMM, PUR, CAW, SAB, GTG, EMR, AGG, VIO, EOM, and DEF) were a reliable index to measure the major concept: college males' perspective on masculinity with regards to media influences. The Cronbach's Alpha, a measure of reliability, was .829 for this current study's data set. This value indicates that the survey questions were a reliable measure of the study's major concept.

Discussion

The hypothesis that there would be a correlation between responding strongly to the survey statements *I learn about*

what a "real man" is from media sources (RMM) and I apply media messages about masculinity to my life (AMM) and to the survey statements which refer to masculine characteristics depicted within media messages was predominantly supported by the data.

Statistically significant correlations ($p < 0.01$) were found which supported this study's hypotheses. There was a significant correlation detected between the statements: *I learn about what a "real man" is from media sources* and the statements *a "real man" shows emotional restraint, "gets" the girl, is aggressive, engages in violent acts when justified, and emasculates other men*. Furthermore, a significant correlation was also identified between the statement *I apply media messages about masculinity to my life* and the statements *a "real man" shows emotional restraint, "gets" the girl, is aggressive, emasculates other men, and must defend his manhood*. These findings are supported by theory and literature. The Family Ecology Theory asserts that individuals are influenced by their surrounding environment. According to this theory, there are four environmental levels which enact influence over individuals and the broadest level is the macrosystem. The macrosystem encompasses the attributes of society which include the media and its messages that convey societal attitudes and beliefs (Strong et al., 2005). The belief that the media is a part of the macrosystem, thus having the ability to influence individuals, is echoed by Kivel and Johnson (2009) who stated that the media is able to help mold males' self-concepts, including their notions about masculinity.

Statistically significant correlations ($p < 0.01$) were also found among survey statements, one of which was a large significant relationship between the survey statement *a "real man" is aggressive and must defend his manhood*. Vandello et al. (2008) concluded that the best way to understand acts

of male aggression is to view these acts as responses to the anxiety males endure as a result of having to live up to the societal norms which deem what is masculine and as a result of having to prove oneself as a true man. A link between having to defend one's manhood and aggression was established in a study by Vandello et al. in which when one's manhood was threatened, males "exhibited a heightened accessibility of physically aggressive cognitions" (p. 1335).

The frequency distribution demonstrated mixed support for this study's hypothesis. The majority of respondents disagreed or strongly disagreed that they learned about and/or applied media messages to their lives; yet, the majority of respondents agreed/strongly agreed with six out of nine survey statements regarding masculine characteristics presented within the media. Also, all nine statements concerning masculine characteristics presented within the media had a large number of undecided responses. Inconsistency and indecisiveness among the respondents may have been due to subjects' lack of acknowledgement of the media's influence and/or their unwillingness to recognize the media's influence, although research has shown that the media has the potential to influence males' concept of masculinity (Kivel & Johnson, 2009; Johnson et al., 2008; Soulliere, 2006). The respondents' lack of acknowledgment and unwillingness to recognize the media's influence may have resulted from the lack of attention on males within gender and media research as well as the societal norm which do not ask males to participate in self-reflection and the sharing of their feelings. Most gender and media research has focused on femininity; masculinity has only been studied by default. Only recently have males been the sole focus of this type of research (Soulliere, 2006).

With regards to the belief that a "real man" is aggressive, engages in violent acts when he is justified, or emasculates

other men to feel secure in his masculinity, the majority of respondents disagreed and/or strongly disagreed, with a large number of respondents being undecided. The findings from this study are not congruent with the bulk of the literature. Soulliere (2006) found media messages, especially those obtained from watching World Wrestling Entertainment (WWE) programs, emphasized the notion that in order to be a man, one must be aggressive and violent. Soulliere also discovered media messages from the WWE programs which communicated the belief men emasculate other men thereby securing their own manhood.

Adding to the research on violence and the media, Johnson et al. (2008) concluded the media maintains the notion of men as violent beings; Kivel and Johnson (2009) found media messages in movies which highlight the idea of men using violence for justified reasons. Additionally, Anderson et al. (2003), after reviewing the research concerning violent media, demonstrated that exposure to media violence has the ability to cause an increase in physical and verbal aggressive behavior. Furthermore Anderson et al. verified that individuals who are not typically aggressive are nevertheless negatively affected by exposure to violent media.

One possible explanation for the incongruity with the literature is that the respondents failed to acknowledge these traits within the male population as a result of the normalization of these types of traits. Also, it is possible that the majority of this sample of respondents do not value these types of masculine characteristics.

For the characteristics that a "real man" feels the pursuit of status (achievement) is very important, competes and wins, is strong and brave, "gets" the girl, shows emotional restraint, and must defend his manhood, the majority of respondents agreed and/or strongly agreed, with a large

number of respondents being undecided. The responses given in this study coincide with what found within the literature. In her study, Soulliere (2006) established that males were receiving messages which stated that in order to be a "real man" one must value success and achievement and one must be a winner. Her research also found messages state that winning and achievement are central to manhood.

Other forms of media, especially movies, have also been shown to continually reinforce the notion that men must be strong both physically and emotionally. Movies also carry on the tradition of viewing men as heroes and holding them to the ideals of heroism, such as being strong, brave, and valiant (Kivel & Johnson, 2009). Through various movies and video games, Johnson et al. (2008) have illustrated how the media emphasizes the notion that males need to get the girl and save the princess. Kivel and Johnson (2009) reiterated this point in their research adding that the media encourages males to impress women at all costs.

Society and the media have conditioned males to believe that showing emotions, minus frustration and anger, is unacceptable. This was demonstrated through Soulliere (2006) research in which she concluded that the WWE was relaying the message to its male viewers that men are not whiners. Men should, and must, employ emotional restraint and avoid any public demonstrations of certain emotions. The need to defend one's manhood is an activity that is socially constructed, as shown by Vandello et al. (2008). Through their research, Vandello et al. presented evidence that shows "manhood is a relatively precarious, socially achieved status" (p. 1330). Soulliere (2006) has established that there is a connection between Vandello et al.'s research and the media. In her research, Soulliere found evidence of WWE messages which informed male viewers about the necessity to defend one's manhood. A "real man" had to

show that he was a real man. This was done through acts of aggression, physical competition, and winning.

Qualitative Analysis

The qualitative comments were analyzed and themed according to their content. The themes were also evaluated according to their frequency. The quotes taken from the qualitative comments from the respondents were transcribed word for word. Emerging from the qualitative comments as the number one video game played by the respondents was *Call of Duty*. Fifty-one out of the 112 respondents reported playing *Call of Duty*. The top television shows reported by respondents was anything sport related and anything comedy related. Each genre has 41 out of 112 respondents. The television shows *Family Guy* and *South Park* accounted for over 40% of the comedy shows watched. Major themes, which originated from the qualitative comments, were the need to take care of self and others (17 out of 112), sense of duty/responsibility (12 out of 112), and respectful/respect for women (12 out of 112).

One reason for the qualitative comments not reflecting and/or expanding on the survey statements is that the respondents of this study identify with what Smiler (2006) called the "average Joe." Smiler (2006) defines the "average Joe" image as "reliable, responsible, and unexceptional" (p. 624). This image of masculinity is neither extremely masculine nor un-masculine, and it is the only image that was supported by the majority of the respondents in Smiler's research (2006). The possibility of this study's respondents also endorsing the "average Joe" image helps explain the large number of undecided responses on the survey statements. Since the "average Joe" image is not extremely masculine, the respondents who identified with this image would be less likely to endorse the typical masculine characteristics

displayed within the media. When asked what his definition of a “real man” was, one respondent’s reply exhibited the key qualities of the “average Joe” image as described by Smiler. The respondent replied, “A real man is a guy who walks away from a fight [unexceptional]. Is not an asshole to girls, treats his girl with respect and love [reliable], and doesn’t cheat [responsible].”

Another respondent, who when asked what his definition of a “real man” was, replied “A real man eats solid ramen, drinks boiling water, snorts ramen seasoning, then FUCK BITCHES.” This vulgar answer may also be a defensive mechanism in which this respondent is denying his true feelings regarding masculinity in order to avoid experiencing any feelings of vulnerability. The use of denial as a defense mechanism was demonstrated in a longitudinal study by Cramer and Block (1998) where they studied the use of denial from preschool age into young adulthood.

Cramer and Block (1998) discovered that young boys employed the defense mechanism of denial in order to reduce anxiety and maintain self-esteem as well as reduce psychological distress. This helped contribute to the boys’ continued use of denial as a defense mechanism into young adulthood. Although Cramer and Block do not specify why boys experience greater vulnerability or what causes this vulnerability, asking a male in young adulthood to express his feelings about masculinity may evoke feelings of vulnerability.

While the previous respondent’s reply could be considered defensive, another respondent self-reflected and acknowledged the limitations society imposes on males. When asked for his definition of “real man,” this respondent answered, “A man who respects women, who isn’t affraid [sic] to show emotions, not affraid [sic] to say I love you, is humble. Pretty close butt [sic] @ times it’s hard due to the harassment of being like that.”

The qualitative comments revealed the diversity among males' perspective on masculinity. The respondents' comments ranged from the stereotypical macho male to the sensitive male who is afraid to show his emotions around other males. The qualitative comments of most respondents though fell among the middle of the masculine spectrum. Multiple respondents left comments that reflected a male's masculine obligation to himself and others.

Limitations

Limitations to this study included the small sample size, the nonrandom design, and the large number of respondents (over 75%) who were ages 18 to 21 years old. This age range is the "college range" and thus may not fully describe males who are in their late 20s or older. Another limitation was using the five-point Likert scale. The large number of undecided responses indicated the potential need for a seven-point Likert scale with more variation. Furthermore, the sampling of just one major-specific introductory course may have limited the range of responses. Respondents were likely pursuing jobs within the same occupational field and shared personality characteristics needed to succeed in their desired occupation.

An additional limitation present in this study is the common attitudes shared among those individuals who live within the same geographical region. The attitudes of males who took this survey at a mid-sized midwestern university exhibit different attitudes of masculinity than males in more urban areas or males in other parts of the United States.

Implications for Practitioners

This study has multiple implications within many areas. It has the ability to increase other researchers and professionals' knowledge and curiosity on this largely unexplored topic by

adding to the literature. This increased interest in the topic of masculinity and the media will result in more research and thus more materials and knowledge for a wide variety of practitioners, such as educators, counselors, therapists, and policy makers. The data from this study could also be utilized by counselors and therapists to assist their male clients with improving their self-esteem and self-concept by bringing awareness to and identifying the negative media influences on the clients' expression of masculinity. The data would be able to help counselors and therapists along with their male clients explore diverse forms of masculinity. These forms may differ from the dominant form presented by the media and could potentially better suit clients' personalities and temperaments. By exploring alternative forms, counselors and therapists would be helping males choose a type of masculinity which is personally beneficial and not self limiting. Instead of trying to conform to societal expectations, males could choose the type of masculinity that best fit their beliefs and values.

At a national level, implications of this study for public policy level could include the enactment of policy changes within the health class curriculum of junior and senior high schools. Health educators could use this study to inform adolescent males about the reality of media influences on personal definitions such as masculinity and the media's portrayal of negative and self-limiting masculine traits. This change would expose male students to alternative forms of masculinity in an environment which encourages the adoption of positive attributes of masculinity rather than hypermasculine traits.

Implications for Future Research

It is recommended that future research would include a random, large sample in order to be able to generalize the

findings nationwide. It would also be useful to increase the variability on the scale-using a seven-point Likert scale instead of a five-point Likert scale.

If the same survey would be used again, it is suggested that there would be two additional questions: one demographic and one open-ended question. The demographic question could differentiate between contact and non-contact sports (e.g., football versus tennis). The open-ended question could ask male respondents to give examples of acceptable and unacceptable acts of violence and aggression. Also if using the same survey, it is recommended sampling multiple major specific introductory courses, general education courses, and higher level courses to ensure a variety of perspectives and ages.

Furthermore, future research could compare males on the amount of media consumption, that is, grouping male respondents into categories consisting of hours of media consumed. It would also be interesting to have females respond to the survey statements and then compare females' perspectives on masculinity to males' perspectives on masculinity. Females could also be grouped into categories consisting of hours of media consumed.

Additional research could be conducted on the significant correlations (at the $p > 0.01$ level) found between the survey statements GTG and SAB, AGG, VIO, EOM and DEF. Such research could help expose the perceptions and beliefs of males which may contribute to their dating and relationship patterns as well as possible dating and relationship violence.

Conclusion

The study demonstrated the importance of males' self-awareness of the type of media consumed and what messages that media is transmitting to its viewers. The lack of research on the topic of masculinity and the media has allowed the

male population to flounder in its attempt to construction positive forms of masculinity. The media's masculine messages emphasize violence, aggression, and emotional restraint (Soulliere, 2006). Furthermore, the avoidance of feminine traits increases the likelihood males will partake in activities which objectify, control, and abuse women. This affects not only males and their life choices, but also the female population, families, and society as a whole. Statistics have shown that one in every four women will experience domestic violence within her lifetime (National Coalition Against Domestic Violence, 2007). With continued research, such as the study at hand, there may not only be an increased interest among researchers and practitioners concerning this topic, but also a potential shift from the expression of negative masculine traits being expressed as the dominant form of masculinity to an expression of positive masculine traits.

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